

**CT-1A-NR: Retrofits: Recipient of TA, Workshops, Training for Non-Residential Sector  
OMB Control No. XXXXXXXX**

*Note that this survey instrument will be used for programs where the program database includes participant information but does not include information on the specific projects completed. This includes sample points that fall under the following sub-categories: “Generalized Workshop or Demonstration,” “Targeted Training or Certification,” or “Technical Assistance” under two BPAC categories: (1) Building Retrofits and (2) Loans and Grants. Note that a similar survey will be created for the sub-categories that fall within the Renewable Energy*

**DATABASE VARIABLES**

&INTERVIEWER NAME.....name of the caller  
&CONTACT.....contact name from program database  
&SPONSOR.....organization that sponsored the effort being researched  
&PROGRAM.....program name  
&DATE.....dates of workshop, demonstration, training funded by SEP  
&APPOINT.....date/time to call back  
&NAME.....person to call back  
&PHONE.....extension or phone number to call back

&WORKSHOP/DEMONSTRATION/TRAINING.....Name of workshop, demonstration, or training  
& TECHNICAL ASSISTANCE.....Name of technical assistance

&BPAC.....Will indicate the specific-BPAC for sample

NOTE THAT OTHER VARIABLES ARE SHOWN IN THE DOCUMENT AS THEY ARE CREATED

**INTRODUCTION AND FINDING CORRECT RESPONDENT**

**INITIAL.** Hello, this is &INTERVIEWER NAME calling on behalf of the United States Department of Energy from Opinion Dynamics Corporation.

May I please speak with &CONTACT, [IF CONTACT NAME AVAILABLE]?

**[IF NEEDED]** This is not a sales call.

**[IF NEEDED]** This is a fact-finding survey only, authorized by the U. S. Department of Energy which wants to understand how you used the information provided through the [&WORKSHOP/TRAINING/DEMONSTRATION; &TECHNICAL ASSISTANCE].

[No, that person is not available right now]	1	[GO TO APPOINT]
[Unable to refer someone who can help]	2	[GO TO APPOINT]
[Yes, that would be me]	3	[GO TO PURPOSE]
[Yes, let me transfer you to_____]	4	[GO TO INTRO3:s]
[No, that is the wrong person]	5	[GO TO INITIAL]
[No, other reason (specify)]	6	[GO TO APPOINT]
[Don't Know]	97	[GO TO APPOINT]
[Refused]	98	[GO TO APPOINT]

**APPOINT.** When would be a good day and time for us to call back?

		RECORD, CONTACT NAME, DAY OF THE WEEK, TIME OF DAY AND DATE TO CALL BACK  CALL BACK AT AGREED TIME
[Don't Know]	-97	THANK & TERMINATE; ASSIGN REFUSED AND REMOVE FROM CALL ORDER
[Refused]	-98	END CALL; KEEP CONTACT IN REGULAR CALL ORDER

**INTRO.** On &DATE, you [attended a &WORKSHOP/TRAINING/DEMONSTRATION]/[received &TECHNICAL ASSISTANCE] offered by &SPONSOR. In an effort to determine what actions you may have taken as a result of participating, we ask that you complete this brief survey. Your input will help &SPONSOR understand the effects of their past efforts. The survey should take no more than 70 minutes for you to complete. The responses you provide will be combined with those of many other individuals and will not be linked to you or your organization in any way.

The U.S. Department of Energy (DOE) would like to inform each individual that the information requested here is being solicited under the statutory authority of Title III of the Energy Policy and Conservation Act of 1975, as amended, which authorizes DOE to administer the State Energy Program (SEP). This information is being sought as part of a national evaluation of SEP, the purpose of which is to reliably quantify Program accomplishments and help inform decisions on future operations. The sole use of the information collected will be for an analysis of national-level Program impacts. Disclosure of this information is voluntary and there will be no adverse effects associated with not providing all or any part of the requested information.

**SCREENER**

**S1.** Do you recall [attending the &WORKSHOP/DEMONSTRATION/TRAINING/CERTIFICATION] /[receiving &TECHNICAL ASSISTANCE] on &DATE?

[Yes]	1	[GO TO RI1]
[No]	2	[THANK AND TERMINATE]
[Don't know]	98	[THANK AND TERMINATE]
[Refused]	99	[THANK AND TERMINATE]

**RESPONDENT INFO: ROLE IN THE PROJECT**

**RI1.** I'd like to start getting a little information about you. What is your job title?  
**[RECORD JOB TITLE]** \_\_\_\_\_

**AC1.** Which of the following best describes where you intended to apply the information you received? **[READ CATEGORIES]**

**NOTE: IF THE ANSWER IS "SOMEWHERE ELSE", SPECIFY THEN PROBE FOR WHICH OF THE FIVE CLASSIFICATIONS BEST DESCRIBES THEM.**

At my home	1	[GO TO ALTERNATIVE RES SURVEY/TERMINATE]
At the facility(ies) my business occupies	2	[GO TO NEXT Q]
At the facility(ies) my business manages (e.g. Property managers)	3	[GO TO NEXT Q]
In facilities occupied or managed by customers to whom I provide services (e.g. Architects, engineering firms, contractors, code inspectors)	4	[TERMINATE]
In the classroom where I teach	5	[TERMINATE]
Somewhere else: Specify_____	6	[GO TO NEXT Q]

**RESPONDENT TYPE DEFINED FOR DISPOSITION**

**[CLASSIFY AC1=1 AS REU (RESIDENTIAL END-USE CUSTOMER)]**

**[CLASSIFY AC1=2, 3 AS CEU (COMMERCIAL END-USE CUSTOMER)]**

**[CLASSIFY AC1= 4 AS MA (MARKET ACTOR)]**

**[CLASSIFY AC1=5 AS TEA (TEACHER)]**

**[CLASSIFY AC1=6 AS DEFAULT ASSUMED RESPONDENTS BASED ON PROGRAM TARGET]**

**INITIAL INVENTORY**

**VN1.** Since &DATE, have you installed any equipment or made any behavioral changes to your facility or facilities in any of the following areas? **[READ LIST IN THE GRID. MARK ALL THAT APPLY]**

a. Lighting	1	[GO TO NEXT Q]
b. Cooling	2	[GO TO NEXT Q]
c. Heating	3	[GO TO NEXT Q]
d. Refrigeration	4	[GO TO NEXT Q]
e. Motors/Drives	5	[GO TO NEXT Q]
f. Any other changes?	7	[GO TO NEXT Q]

**EFFECT OF OTHER PROGRAMS**

**OP1** In completing the project[s] that you just discussed, did you make use of financial support such as incentives or loans offered by sponsors, such as, local utilities, industry associations, or government agencies? For this question we are not interested in commercial offers such as rebate and incentive packages from manufacturers, vendors, or retailers.

[YES]	1	[ASK OP2]
[NO]	2	[GO TO OP4]
[DON'T KNOW]	-97	[GO TO OP4]
[REFUSED]	-98	[GO TO OP4]

**OP2.** Which organization[s] sponsored the [those] program[s]?

State/ State Energy Office	1	[GOTO OP3]
Other, Specify	2 [RECORD RESPONSE]	[GOTO OP3]
[DON'T KNOW]	-97	[GOTO OP3]
[REFUSED]	-98	[GOTO OP3]

**OP3.** Did the [&WORKSHOP/DEMONSTRATION/TRAINING][&TECHNICAL ASSISTANCE] inform you about the assistance and support that you received?

[Yes]	1	[GO TO NEXT SECTION]
[No]	2	[GO TO OP4]
[Don't know]	98	[GO TO OP4]
[Refused]	99	[GO TO OP4]

**OP4.** Did the [&WORKSHOP/DEMONSTRATION/TRAINING][&TECHNICAL ASSISTANCE] provide you with any options for assistance and support?

[Yes]	1	[GO TO NEXT SECTION]
[No]	2	[GO TO NEXT SECTION]
[Don't know]	98	[GO TO NEXT SECTION]
[Refused]	99	[GO TO NEXT SECTION]

**DETERMINE APPROPRIATE END-USE BATTERIES**

**DETERMINED BASED ON VN1.**

- [&LIGHTING]
- [&COOLING]
- [&HEATING]
- [&REFRIGERATION]
- [&MOTORS]
- [&OTHER]

ASK IF MULTIPLE MEASURES

**MM1.** You indicated that you made changes across a number of areas. Which ones would you say resulted in the most energy savings?

**NOTE: DEFAULT TO HVAC, LIGHTING ACTION, INSERT BY LEVEL OF ENERGY SAVINGS**

	<b>Rank 1</b>	<b>Rank2</b>	<b>Rank 3</b>	<b>DK/REF</b>
Lighting				
Cooling				
Heating				
Refrigeration				
Motors				
Others will be added based on training:				
Change_a (TBD)				
Change_b (TBD)				

- REASSIGN TO MAX 2**
- [&LIGHTING]
  - [&COOLING]
  - [&HEATING]
  - [&REFRIGERATION]

[\[&MOTORS\]](#)  
[\[&OTHER\]](#)

*Note that all end-use specific sections use questions from the building retrofit survey effort.*

**LIGHTING EQUIPMENT**

[\[IF &LIGHTING = TRUE\]](#)

**In the next section we'll be discussing changes that you made to lighting systems.**

**LI0.** You stated that you made a change to your lighting system. Which of the following best describes the specific change(s) you made? [\[READ LIST. LIST WILL BE SHORTENED FOR SPECIFIC PROGRAM\]](#)

	<b><i>Fixtures</i></b>
1	High performance T8 (1" diameter bulbs)
2	T8 fluorescent fixtures (1" diameter bulbs)
3	T-5 Fixtures
4	HID (High Density Discharge) Fixtures, Pulse Start
5	High bay fluorescent lighting
6	Compact Fluorescent, Screw-in Modular
7	Compact Fluorescent, Hardwire
8	Exit Signs, Compact Fluorescent
9	Exit Signs, LED
10	LED Overhead Fixtures
11	T12 fluorescent fixtures (1.5" diameter bulbs)
77	Other Fixtures (Specify_____)
	<b><i>Controls</i></b>
12	Timeclock controls
13	Occupancy sensors
14	Bypass/Delay Timers
15	Photocell, light sensors
16	Daylighting control strategies
78	Other controls (Specify_____)
17-35	[LIST SPECIFIC Lighting Behaviors/Behavioral changes]
98	[Don't know]
99	[Refused]

**RESPONSE = &LI\_TECH**

[\[FOR ANY LI0=1-16, Equipment Installed\]](#)

[\[FOR EACH FIXTURE TYPE REPORTED\]](#)

**LI1.** How many &LI\_TECH did you install?

ENTER NUMBER	_____	<a href="#">[GO TO LI2]</a>
[Don't know]	9997	<a href="#">[GO TO LI2]</a>

**[FOR EACH FIXTURE TYPE REPORTED]**

**LI2.** What types of fixtures, if any, were replaced when installing &LI\_TECH [ALLOW MULTIPLE RESPONSES.]

Did not replace anything - new equipment	0
High performance T8 (1" diameter bulbs)	1
T8 fluorescent fixtures (1" diameter bulbs)	2
T10 fluorescent fixtures	3
T12 Fixtures (1.5" diameter bulbs)	4
HID (High Density Discharge) Fixtures, Compact	5
Compact Fluorescent, Screw-in Modular	6
Compact Fluorescent, Hardwire	7
Incandescent	8
Exit Signs, Compact Fluorescent	9
Exit Signs, LED	10
Halogen	11
Electronic Ballast	13
Magnetic Ballast	14
Other Fluorescent	19
Fat/Thick Tubes	20
Skinny/Thin Tubes	21
T5 Fixtures (5/8" diameter)	22
High pressure sodium	23
Metal Halide	24
Mercury Vapor	25
Other (Specify_____)	77
Don't know	-97
Refused	-98

**[FOR EACH FIXTURE TYPE REPLACED, ASK LI3a]**

**LI3a.** Did you remove the same number of old fixtures as you installed through the project?

[Yes]	1	[GO TO LI3a FOR NEXT FIXTURE TYPE]
[No]	2	[GO TO LI3b]
[Don't know]	-97	[GO TO LI3a FOR NEXT FIXTURE TYPE]
[Refused]	-98	[GO TO LI3a FOR NEXT FIXTURE TYPE]

**LI3b.** Did you remove fewer or more fixtures than you installed through the project?

[More]	1	[GO TO LI3c]
[Fewer]	2	[GO TO LI3c]
[Don't know]	97	[GO TO LI3a FOR NEXT FIXTURE TYPE]
[Refused]	98	[GO TO LI3a FOR NEXT FIXTURE TYPE]

**LI3c.** How many fewer/more fixtures did you install?

ENTER NUMBER	_____	[GO TO LI3d]
[Don't know]	9997	[GO TO LI3d]

**LI3d.** On average, approximately how old were the fixtures that were removed and replaced with &LI\_TECH?  
Would you say...

RECORD YEARS OLD	___	[GO TO LI3a FOR NEXT FIXTURE TYPE]
Don't know	97	[GO TO LI3a FOR NEXT FIXTURE TYPE]
Refused	98	[GO TO LI3a FOR NEXT FIXTURE TYPE]

**RESPONSE GRID FOR LI EQUIPMENT**

	&LI_TECH	LI1. Number	LI2. Equipment replaced	LI3a Replaced same #	LI3b Replaced fewer/more	LI3c # Difference	LI3d Age of Equip
	<b>Lamps &amp; Fixtures</b>						
0	No fixtures removed: new construction or addition						
1	High performance T8 (1" diameter bulbs)						
2	T8 fluorescent fixtures (1" diameter bulbs)						
3	T-5 Fixtures						
4	HID (High Density Discharge) Fixtures, Pulse Start						
5	High bay fluorescent lighting						
6	Compact Fluorescent, Screw-in Modular						
7	Compact Fluorescent, Hardwire						
8	Exit Signs, Compact Fluorescent						
9	Exit Signs, LED						
10	LED Overhead Fixtures						
11	T12 fluorescent fixtures (1.5" diameter bulbs)						
77	Other fixture, Specify _____						

**LIGHTING --CONTROLS**

[FOR EACH CONTROL TYPE REPORTED IN LI0 ASK]

**LI5a.** What is the total wattage controlled by &LI\_TECH?

**LI5b.** Before installing the &LI\_TECH, how many hours per day did the lighting controlled by the &LI\_TECH operate?

**LI5c.** What is the percent reduction in operating hours for the lighting controlled by &LI\_TECH?

**RESPONSE GRID FOR LI CONTROLS**



	<b>Controls</b>	<b>LI5a total wattage controlled</b>	<b>LI5b hours/day before controls</b>	<b>LI5c % reduction in operating hours</b>
12	Timeclock controls			
13	Occupancy sensors			
14	Bypass/Delay Timers			
15	Photocell, light sensors			
16	Daylighting control strategies			
78	Other Controls			

**LIGHTING COSTS/PART OF ATTRIBUTION FOR INSTALLATIONS**

[ASK IF OP1=1]

**ATR1a.** For your lighting projects, what percentage of the total costs of the project were covered by the financial support that you received?

	<b>ATR1</b>
<b>Measure type</b>	<b>% of Total</b>
<b>a. Lighting</b>	
[Don't know]	
[Refused]	

**LIGHTING OPERATIONS AND MAINTENACE CHANGES**

**LOP1.** Did you make any changes to the operation and maintenance of your lighting system?

Yes	1	[GO TO LOP2]
No	2	[GO TO NEXT SECTION]
Don't know	97	[GO TO NEXT SECTION]
Refused	98	[GO TO NEXT SECTION]

**&LI\_OMCHANGE IF LOP1=1**

**LOP2.** What changes did you make? **[OPEN END]**

OPEN END (Specify)	1	[GO TO COP3]
Don't know	97	[GO TO COP3]
Refused	98	[GO TO COP3]

**LIGHTING –ALL CHANGES**

**You stated that you [read in &LI\_TECH or “Made a change to your operation and maintenance”  
[FOR EACH CHANGE]**

**LI4.** Do you remember when you made this change?

MONTH	_____	[GO TO NEXT &LI_TECH/OMCHANGE THEN NEXT Q]
YEAR	_____	[GO TO NEXT &LI_TECH/OMCHANGE THEN NEXT Q]
[Don't know]	98	[GO TO NEXT &LI_TECH/OMCHANGE THEN NEXT Q]
[Refused]	99	[GO TO NEXT &LI_TECH/OMCHANGE THEN NEXT Q]

**[FOR EACH CHANGE]**

**LI4a.** Thinking about the changes that you made. How much total space did this effect?

ENTER SQUARE FEET	_____	[GO TO NEXT &LI_TECH/OMCHANGE THEN NEXT Q]
[Don't know]	-9997	[GO TO NEXT &LI_TECH/OMCHANGE THEN NEXT Q]
[Refused]	-9998	[GO TO NEXT &LI_TECH/OMCHANGE THEN NEXT Q]

**[ASK FOR EACH CHANGE]**

**LI4b – LI4l.** What percent of the space served by the &LI\_TECH/OMCHANGE falls into each of the following categories?

LI4 b	Office/ Professional
LI4c	Warehouse
LI4 d	Food sales
LI4e	Health Care
LI4f	Public Assembly
LI4 g	Food Service
LI4 h	Hotel/Motel/Dorm
LI4i	Retail
LI4j	Service (excluding food)
LI4 k	Education
LI4l	Other

[PROGRAMMER: PROGRAM SHOULD VERIFY THAT PERCENTS SUM TO 100%]

*\*Note that we will get hours of operation indirectly from the space use question. We will use secondary research (perhaps our on-sites) to tell us the average wattage of each technology type in each space type.*

RESPONSE GRID FOR LI4

	&LI_Tech	LI4. When?	LI4a Sq Ft Lit	LI4b % office/p rofession al	LI4c % warehou se	LI4d % food sales	LI4e % health care	LI4f % public assembly	LI4g % food service	LI4h % hotel/mo tel/dorm	LI4i % retail	LI4j % non- food service	LI4k % educatio n	LI4l % other
	<b>Lamps &amp; Fixtures</b>													
1	High performance T8 (1" diameter bulbs)													
2	T8 fluorescent fixtures (1" diameter bulbs)													
3	T-5 Fixtures													
4	HID (High Density Discharge) Fixtures, Pulse Start													
5	High bay fluorescent lighting													
6	Compact Fluorescent, Screw-in Modular													
7	Compact Fluorescent, Hardwire													
8	Exit Signs, Compact Fluorescent													
9	Exit Signs, LED													
10	LED Overhead Fixtures													
11	T12 fluorescent fixtures													
77	Other fixture (Specify)													
	OM CHANGE													

**COOLING EQUIPMENT BATTERY**

**[IF & COOLING = TRUE]**

Now we would like to discuss changes that you made to your cooling systems.

**CL-N1.** You stated that you made a change to your cooling system. Which of the following best describes the specific change(s) you made? [READ LIST. LIST WILL BE SHORTENED FOR SPECIFIC PROGRAM]

**[ALLOW MULTIPLE ANSWERS]**

None	0	<b>[GO TO NEXT SECTION]</b>
Split system	1	<a href="#">[GO TO CL-N2]</a>
Packaged system	2	<a href="#">[GO TO CL-N2]</a>
Packaged Terminal AC or Heat pump	3	<a href="#">[GO TO CL-N2]</a>
Evaporative cooler	4	<a href="#">[GO TO CL-N2]</a>
Water chiller / Cooling tower	5	<a href="#">[GO TO CL-N2]</a>
Individual AC or Heat pump units	6	<a href="#">[GO TO CL-N2]</a>
Window / Wall units	7	<a href="#">[GO TO CL-N2]</a>
[Other (Specify_____)]	77	<a href="#">[GO TO CL-N2]</a>
[Don't Know]	-97	<b>[ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO KNOWS. THEN NEXT SECTION]</b>
[Refused]	-98	<b>[GO TO NEXT SECTION]</b>

**CL-N2.** How many units of &C\_TECH did you install?

RECORD NUMBER		<a href="#">[GO TO CL-N3]</a>
Don't know	97	<a href="#">[GO TO CL-N3]</a>
Refused	98	<a href="#">[GO TO CL-N3]</a>

**CL-N3.** What is the total capacity of the units you installed?

RECORD CAPACITY NUMBER	_____	[GO TO CL-N4]
RECORD CAPACITY UNITS (TONS, BTU/HOUR, THERM, ETC)	_____	[GO TO CL-N4]
Don't know	97	[GO TO CL-N4]
Refused	98	[GO TO CL-N4]

<b>CL-N4.</b> What was the efficiency rating of the &CTECH_EFF units that you installed through &PROGRAM? <b>[RECORD FOR ALL UNITS INSTALLED THROUGH &amp;PROGRAM.]</b> RECORD EFFICIENCY NUMBER		[GO TO NEXT CL-N1]
RECORD EFFICIENCY UNIT (EER, SEER, KW/TON)		[GO TO NEXT CL-N1]
Don't know	-97	[GO TO NEXT CL-N1]
Refused	-98	[GO TO NEXT CL-N1]

**RESPONSE GRID FOR COOLING EQUIPMENT**

	ITEM CL-N1	CL-N2 Units	CL-N3 Capacity	CL-N4 Efficiency
1	<b>Split system</b> (two components; compressor is separate from the supply air fan, air conditioner, or heat pump)			
2	<b>Packaged systems</b> (one component; rooftop units)			
3	<b>Package Terminal A/C or Heat Pump</b> (e.g., Hotel/Motel units)			
4	<b>Evaporative coolers</b> (swamp coolers)			
6	<b>Water Chiller/Cooling Towers</b> (Central plant)			
6	<b>Individual A/C or Heat Pump Units</b> (e.g., Unitary Equipment, Central A/C with multiple units, single unit for small business)			
7	<b>Window/Wall Units</b>			
77	Other (Specify)			

[ASK CL7a AND CL7b FOR EACH MEASURE IDENTIFIED IN CL-N1]

**CL7a.** Are the operating hours for the &C\_TECH equipment independent of the weather? For example, is the equipment used for process cooling, a data center, or something else that requires it to run even when it is cool outside?

Yes	1	[GO TO CL7b]
No	2	[GO TO CL8a]
[Don't know]	-97	[GO TO CL7b]
[Refused]	-98	[GO TO CL7b]

**CL7b.** How many hours per year does the equipment operate?

RECORD NUMBER	_____	[GO TO CL8a]
Don't know	-97	[GO TO CL8a]
Refused	-98	[GO TO CL8a]

**ASK CL8a THROUGH CL8f FOR EACH MEASURE IDENTIFIED IN CL-N1]**

Next, I'd like to ask you a few questions about the equipment that was removed and replaced when you installed the new cooling equipment.

**CL8a.** What types of cooling equipment, if any, were replaced when installing the new &C\_TECH? **[SELECT ALL THAT APPLY]**

<b>SELECT EQUIPMENT TYPE [RECORD AS &amp;C_TECH_REM]</b>	
<b>No A/C Removed</b>	<b>0</b>
<b>Split system</b> (two components; compressor is separate from the supply air fan, air conditioner, or heat pump)	<b>1</b>
<b>Packaged systems</b> (one component; rooftop units)	<b>2</b>
<b>Package Terminal A/C or Heat Pump</b> (e.g., Hotel/Motel units)	<b>3</b>
<b>Evaporative coolers</b> (swamp coolers)	<b>4</b>
<b>Water Chiller/Cooling Towers</b> (Central plant)	<b>5</b>
<b>Individual A/C or Heat Pump Units</b> (e.g., Unitary Equipment, Central A/C with multiple units, single unit for small business)	<b>6</b>
<b>Window/Wall Units</b>	<b>7</b>
Other (Specify)	<b>77</b>

**CL8b.** How many units were removed?

RECORD NUMBER	_____
Don't know	-97
Refused	-98

**CL8c.** What was the total capacity of the units you removed?

RECORD CAPACITY NUMBER	
RECORD CAPACITY UNITS (TONS, BTU/HOUR, THERM, ETC)	
[Don't know]	-97
[Refused]	-98

**CL8d.** Generally, how would you describe the condition of &C\_TECH\_REM that was removed and replaced? Was it...

Inoperable (broken)	1
Poor condition	2
Fair condition	3
Good condition	4
[Don't know]	-97
[Refused]	-98

**CL8e.** What was the efficiency rating of the removed &C\_TECH\_REM?

RECORD EFFICIENCY NUMBER		<a href="#">[GO TO NEXT CL8a]</a>
RECORD EFFICIENCY UNIT (EER, SEER, KW/TON)		<a href="#">[GO TO NEXT CL8a]</a>
[Don't know]	-97	<a href="#">[GO TO CL8f]</a>
[Refused]	-98	<a href="#">[GO TO CL8f]</a>

**CL8f.** On average, how old was the &C\_TECH\_REM that was removed and replaced? Would you say...

RECORD NUMBER OF YEARS	_____	<a href="#">[GO TO NEXT CL8a]</a>
[Don't know]	97	<a href="#">[GO TO NEXT CL8a]</a>
[Refused]	98	<a href="#">[GO TO NEXT CL8a]</a>



**RESPONSE GRID FOR COOLING REPLACED SYSTEM**

		Number	Capacity	Condition	Efficiency	Age
0	<b>No A/C Removed</b>					
1	<b>Split system</b> (two components; compressor is separate from the supply air fan, air conditioner, or heat pump)					
2	<b>Packaged systems</b> (one component; rooftop units)					
3	<b>Package Terminal A/C or Heat Pump</b> (e.g., Hotel/Motel units)					
4	<b>Evaporative coolers</b> (swamp coolers)					
5	<b>Water Chiller/Cooling Towers</b> (Central plant)					
6	<b>Individual A/C or Heat Pump Units</b> (e.g., Unitary Equipment, Central A/C with multiple units, single unit for small business)					
7	<b>Window/Wall Units</b>					
77	Other (Specify)					

**COOLING CONTROLS**

**CL9a.** Did you install any cooling controls or variable speed drives? .

Yes	1	[GO TO CL9b]
No	2	[GO TO NEXT SECTION]
Don't know	97	[GO TO NEXT SECTION]
Refused	98	[GO TO NEXT SECTION]

**CL9b.** What kinds of controls did you install? **[SELECT ALL THAT APPLY]**

Adjustable Speed Drives	1	<a href="#">[GO TO CL9c]</a>
Energy Management System	2	<a href="#">[GO TO CL9c]</a>
HVAC Controls: Manual thermostat	3	<a href="#">[GO TO CL9c]</a>
HVAC Controls: Bypass Timer	4	<a href="#">[GO TO CL9c]</a>
HVAC Controls: Time Clock	5	<a href="#">[GO TO CL9c]</a>
HVAC Controls: Set-Back Programmable Thermostat	6	<a href="#">[GO TO CL9c]</a>
CO2 Sensors/Demand Control Ventilation	7	<a href="#">[GO TO CL9c]</a>
Economizers	8	<a href="#">[GO TO CL9c]</a>
Other (Specify)	77	<a href="#">[GO TO CL9c]</a>
Don't know	97	<a href="#">[GO TO CL9c]</a>
Refused	98	<a href="#">[GO TO CL9c]</a>

**[FOR EACH CONTROL TECHNOLOGY MENTIONED IN CL9b, ASK CL9c THROUGH CL9f]**

**CL9c.** What percentage of the total enclosed floor space in your facility do those new controls serve?

ENTER PERCENT	_____	<a href="#">[GO TO CL9d]</a>
Don't know	97	<a href="#">[GO TO CL9d]</a>
Refused	98	<a href="#">[GO TO CL9d]</a>

**CL9d.** What kinds of controls, if any, did the new equipment replace? **[SELECT ALL THAT APPLY]**

No controls replaced/new construction or addition	0	<a href="#">[GO TO NEXT CONTROL TYPE FROM CL9b]</a>
Adjustable Speed Drives	1	<a href="#">[GO TO CL9e]</a>
Energy Management System	2	<a href="#">[GO TO CL9e]</a>
HVAC Controls: Manual thermostat	3	<a href="#">[GO TO CL9e]</a>
HVAC Controls: Bypass Timer	4	<a href="#">[GO TO CL9e]</a>
HVAC Controls: Time Clock	5	<a href="#">[GO TO CL9e]</a>
HVAC Controls: Set-Back Programmable Thermostat	6	<a href="#">[GO TO CL9e]</a>
CO2 Sensors/Demand Control Ventilation	7	<a href="#">[GO TO CL9e]</a>
Economizers	8	<a href="#">[GO TO CL9e]</a>
Other (Specify)	77	<a href="#">[GO TO CL9e]</a>
[Don't know]	-97	<a href="#">[GO TO CL9e]</a>
[Refused]	-98	<a href="#">[GO TO CL9e]</a>

**CL9e.** Generally, how would you describe the condition cooling control equipment that was removed and replaced? Was it...

Inoperable (broken)	1	<a href="#">[GO TO CL9f]</a>
Poor condition	2	<a href="#">[GO TO CL9f]</a>
Fair condition	3	<a href="#">[GO TO CL9f]</a>
Good condition	4	<a href="#">[GO TO CL9f]</a>
Don't Know	97	<a href="#">[GO TO CL9f]</a>
Refused	98	<a href="#">[GO TO CL9f]</a>

**CL9f.** On average, how old was the control equipment that was removed and replaced? Would you say...

Less than 5 years old	1	<a href="#">[GO TO NEXT SECTION]</a>
Between 5 and 10 years old	2	<a href="#">[GO TO NEXT SECTION]</a>
10 to 20 years old	3	<a href="#">[GO TO NEXT SECTION]</a>
more than 20 years old	4	<a href="#">[GO TO NEXT SECTION]</a>
[Don't know]	97	<a href="#">[GO TO NEXT SECTION]</a>
[Refused]	98	<a href="#">[GO TO NEXT SECTION]</a>

**RESPONSE GRID FOR CONTROLS**

		CL9c	CL9d	CL9e	CL9f
1	Adjustable Speed Drives				
2	Energy Management System				
3	HVAC Controls: Manual thermostat				
4	HVAC Controls: Bypass Timer				
5	HVAC Controls: Time Clock				
6	HVAC Controls: Set-Back Programmable Thermostat				
7	CO2 Sensors/Demand Control Ventilation				
8	Economizers				
77	Other (Specify)				
98	Don't know				
99	Refused				

**COOLING COSTS/BACK UP FOR ATTRIBUTION**

[ASKIF OP1=1]

**ATR1c.** For your cooling projects, what percentage of the total costs of the project were supported by the financial support that you received?

	ATR1
Measure type	% of Total
Cooling	
[Don't know]	
[Refused]	

**COOLING OPERATIONS AND MAINTENACE CHANGES**

**COP1.** Did you make any behavioral or operation and maintenance changes to your heating or cooling system?

Yes	1	[GO TO COP2]
No	2	[GO TO NEXT SECTION]
Don't know	97	[GO TO NEXT SECTION]
Refused	98	[GO TO NEXT SECTION]

**COP2.** What changes did you make? **[OPEN END]**

OPEN END (Specify, Probe for equipment effected and specific changes)	1	[GO TO COP3]
Don't know	97	[GO TO COP3]
Refused	98	[GO TO COP3]

**COOLING –ALL CHANGES**

You stated that you [read in &C\_TECH or “made a change to your operations and maintenance”]

**[FOR EACH CHANGE]**

**CI4a.** Do you remember when you made this change?

MONTH	_____	[GO TO NEXT &C_TECH/OMCHANGE THEN NEXT Q]
YEAR	_____	[GO TO NEXT &C_TECH/OMCHANGE THEN NEXT Q]
[Don't know]	98	[GO TO NEXT &C_TECH/&LC_OMCHANGE THEN NEXT Q]
[Refused]	99	[GO TO NEXT &C_TECH/OMCHANGE THEN NEXT Q]

**[FOR EACH CHANGE -- NOT CONTROLS]**

**CI4b.** Thinking about the changes that you made. How much total space did this effect?

ENTER SQUARE FEET	_____	[GO TO NEXT &C_TECH/&LC_OMCHANGE THEN NEXT Q]
[Don't know]	-9997	[GO TO NEXT &C_TECH/&LC_OMCHANGE THEN NEXT Q]
[Refused]	-9998	[GO TO NEXT &C_TECH/&LC_OMCHANGE THEN NEXT Q]

**[ASK FOR EACH CHANGE—NOT CONTROLS]**

**CI4b – CI4l.** What percent of the space served by the &C\_TECH/OMCHANGE falls into each of the following categories?

CI4b	Office/ Professional
CI4c	Warehouse
CI4d	Food sales
CI4e	Health Care
CI4f	Public Assembly
CI4g	Food Service
CI4h	Hotel/Motel/Dorm
CI4i	Retail
CI4j	Service (excluding food)
CI4k	Education
CI4l	Other

[PROGRAMMER: PROGRAM SHOULD VERIFY THAT PERCENTS SUM TO 100%]

## HEATING EQUIPMENT BATTERY

[IF &HEATING = TRUE]

**I want to ask you about the heating projects.**

**HT-N1.** You stated that you made a change to your heating system. Which of the following best describes the specific change(s) you made? [READ LIST. LIST WILL BE SHORTENED FOR SPECIFIC PROGRAM]

[ALLOW MULTIPLE ANSWERS]

ITEM	Number
Central Boilers	1
Packaged Heating Units	2
Individual Space Heater / Portable Room Heater / Strip Heating	3
Split-system Heat Pumps	4
Central Furnaces	5
District Steam or Hot Water	6
Radiant Heaters	7
Other (Specify)	77

**RESPONSE= &H\_TECH**

**HT-N2.** How many units of &H\_TECH did you install?

RECORD NUMBER		[GO TO HT-N3]
Don't know	-97	[GO TO HT-N3]
Refused	-98	[GO TO HT-N3]

**HT-N3.** What is the total capacity of the units you installed?

RECORD CAPACITY NUMBER		__ [GO TO HT-N4]
RECORD CAPACITY UNITS (TONS, BTU/HOUR, THERM, ETC)		__ [GO TO HT-N4]
[Don't know]	-97	[GO TO HT-N4]
[Refused]	-98	[GO TO HT-N4]

**HT-N4.** What was the efficiency rating of the &H\_TECH\_EFF units that you installed?

[RECORD FOR ALL UNITS INSTALLED]

RECORD EFFICIENCY NUMBER		[GO TO HT-N2 FOR NEXT &H_TECH ]
RECORD EFFICIENCY UNIT (AFUE, Thermal efficiency, specify other)		[GO TO HT-N2 FOR NEXT &H_TECH ]
Don't know	-97	[GO TO HT-N2 FOR NEXT &H_TECH ]
Refused	-98	[GO TO HT-N2 FOR NEXT &H_TECH ]

[ASK FOR EACH MEASURE IDENTIFIED IN HT-N1]

**HT-N5.** How many hours per year does the equipment operate?

RECORD NUMBER	_____	[GO TO CL8a]
Don't know	-97	[GO TO CL8a]
Refused	-98	[GO TO CL8a]

**RESPONSE GRID FOR HEATING EQUIPMENT**

	ITEM	Number	Capacity	Efficiency	Hours
1	Central Boilers				
2	Packaged Heating Units				
3	Individual Space Heater / Portable Room Heater / Strip Heating				
4	Split-system Heat Pumps				
5	Central Furnaces				
6	District Steam or Hot Water				
7	Radiant Heaters				
77	Other (Specify)				

**ASK HT8a THROUGH HT8f FOR EACH MEASURE IDENTIFIED IN HT-N1]**

Next, I'd like to ask you a few questions about the equipment that was removed and replaced when you installed the new heating equipment.

**HT8a.** What types of heating equipment, if any, were replaced when installing the new &H\_TECH? **[SELECT ALL THAT APPLY]**

NONE	1	
SELECT EQUIPMENT TYPE FROM LIST	2	[RECORD AS &H_TECH_REM]
[Don't Know]	-97	[GO TO HT8a FOR NEXT &H_TECH]
[Refused]...	-98	[GO TO HT8a FOR NEXT &H_TECH]

**[ASK HT8b THROUGH HT8f FOR EACH MEASURE IDENTIFIED IN HT8a]**

**HT8b.** When you installed &H\_TECH?, how many units were removed?

RECORD NUMBER	_____	[GO TO HT8c]
[Don't know]	97	[GO TO HT8c]
[Refused]	98	[GO TO HT8c]



**HT8c.** What was the total capacity of the units you removed?

RECORD CAPACITY NUMBER		[GO TO HT8d]
RECORD CAPACITY UNITS (TONS, BTU/HOUR, THERM, ETC)		[GO TO HT8d]
[Don't know]	-97	[GO TO HT8d]
[Refused]	-98	[GO TO HT8d]

**HT8d.** Generally, how would you describe the condition of &H\_TECH\_REM that was removed and replaced? Was it...

Inoperable (broken)	1
Poor condition	2
Fair condition	3
Good condition	4
[Don't know]	-97
[Refused]	-98

**HT8e.** What was the efficiency rating of the removed &H\_TECH\_REM?

RECORD EFFICIENCY NUMBER		[GO TO NEXT HT8a]
RECORD EFFICIENCY UNIT (EER, SEER, KW/TON)		[GO TO NEXT HT8a]
[Don't know]	-97	[GO TO HT8f]
[Refused]	-98	[GO TO HT8f]

**HT8f.** On average, how old was the &H\_TECH\_REM that was removed and replaced? Would you say...

Less than 5 years old	1	[GO TO NEXT HT8a]
Between 5 and 10 years old	2	[GO TO NEXT HT8a]
10 to 20 years old	3	[GO TO NEXT HT8a]
more than 20 years old	4	[GO TO NEXT HT8a]
[Don't know]	-97	[GO TO NEXT HT8a]
[Re-fused]	-98	[GO TO NEXT HT8a]

**RESPONSE GRID FOR HEATING EQUIPMENT REPLACED**

		Number	Capacity	Condition	Efficiency	Age
<b>0</b>	<b>No heating Removed</b>		skip	Skip	skip	skip
<b>1</b>	Central Boilers					
<b>2</b>	Packaged Heating Units					
<b>3</b>	Individual Space Heater / Portable Room Heater / Strip Heating					
<b>4</b>	Split-system Heat Pumps					
<b>5</b>	Central Furnaces					
<b>6</b>	District Steam or Hot Water					
<b>7</b>	Radiant Heaters					
<b>77</b>	Other (Specify)					

**HEATING CONTROLS**

[IF &HEATING = TRUE]

**HT9a.** Did you install any heating or heating controls or variable speed drives?

Yes	1	[GO TO HT9b]
No	2	[GO TO NEXT SECTION]
Don't know	97	[GO TO NEXT SECTION]
Refused	98	[GO TO NEXT SECTION]

**HT9b.** What kinds of controls did you install? [SELECT ALL THAT APPLY]

Adjustable Speed Drives	1	[GO TO HT9c]
Energy Management System	2	[GO TO HT9c]
HVAC Controls: Manual thermostat	3	[GO TO HT9c]
HVAC Controls: Bypass Timer	4	[GO TO HT9c]
HVAC Controls: Time HTock	5	[GO TO HT9c]
HVAC Controls: Set-Back Programmable Thermostat	6	[GO TO HT9c]
CO2 Sensors/Demand Control Ventilation	7	[GO TO HT9c]
Economizers	8	[GO TO HT9c]
Other (Specify)	77	[GO TO HT9c]
Don't know	-97	[GO TO HT9c]
Refused	-98	[GO TO HT9c]

[FOR EACH CONTROL TECHNOLOGY MENTIONED IN HT9b, ASK HT9c THROUGH HT9f]

**HT9c.** What percentage of the total enclosed floor space in your facility do those new controls serve?

ENTER PERCENT	_____
Don't know	-97
Refused	-98

**HT9d.** What kinds of controls, if any, did the new equipment replace? **[SELECT ALL THAT APPLY]**

No controls replaced/new construction or addition	0	NEXT CONTROL TYPE FROM HT9b
Adjustable Speed Drives	1	[GO TO HT9e]
Energy Management System	2	[GO TO HT9e]
HVAC Controls: Manual thermostat	3	[GO TO HT9e]
HVAC Controls: Bypass Timer	4	[GO TO HT9e]
HVAC Controls: Time HTock	5	[GO TO HT9e]
HVAC Controls: Set-Back Programmable Thermostat	6	[GO TO HT9e]
CO2 Sensors/Demand Control Ventilation	7	[GO TO HT9e]
Economizers	8	[GO TO HT9e]
Other (Specify)	77	[GO TO HT9e]
Don't know	-97	[GO TO HT9e]
Refused	-98	[GO TO HT9e]

**HT9e.** Generally, how would you describe the condition the heating and heating control equipment that was removed and replaced? Was it...

Inoperable (broken)	1
Poor condition	2
Fair condition	3
Good condition	4
Don't Know	-97
Refused	-98

**HT9f.** On average, how old was the control equipment that was removed and replaced? Would you say...

RECORD NUMBER OF YEARS	_____	<a href="#">[GO TO NEXT SECTION]</a>
[Don't know]	-97	<a href="#">[GO TO NEXT SECTION]</a>
[Refused]	-98	<a href="#">[GO TO NEXT SECTION]</a>

**RESPONSE GRID FOR HEATING EQUIPMENT REPLACED**

		HT9c	HT9d	HT9e	HT9f
1	Adjustable Speed Drives				
2	Energy Management System				
3	HVAC Controls: Manual thermostat				
4	HVAC Controls: Bypass Timer				
5	HVAC Controls: Time HTock				
6	HVAC Controls: Set-Back Programmable Thermostat				
7	CO2 Sensors/Demand Control Ventilation				
8	Economizers				
77	Other (Specify)				
-97	[Don't know]				
-98	[Refused]				

**HEATING COSTS/ATTRIBUTION**

[ASK IF OP1=1]

**ATR1c.** For your heating projects, what percentage of the total costs of the project were covered by the financial support that you received?

	ATR1
Measure type	% of Total
c. Heating	
[Don't know]	
[Refused]	

**HEATING OPERATIONS AND MAINTENACE CHANGES**

**HOP1.** Did you make any changes to the operation and maintenance of your heating system?

Yes	1	[GO TO NEXT SECTION]
No	2	[GO TO NEXT Q]
Don't know	97	[GO TO NEXT Q]
Refused	98	[GO TO NEXT Q]

**HOP2.** What changes did you make? [OPEN END]

OPEN END (Specify)	1	[GO TO NEXT Q]
Don't know	97	[GO TO NEXT Q]
Refused	98	[GO TO NEXT Q]

## HEATING –ALL CHANGES

You stated that you [read in &H\_TECH or “made a change to your operations and maintenance”]

**[FOR EACH CHANGE]**

**HI4a.** Do you remember when you made this change?

MONTH	_____	[GO TO NEXT &H_TECH/OMCHANGE THEN NEXT Q]
YEAR	_____	[GO TO NEXT &H_TECH/OMCHANGE THEN NEXT Q]
[Don't know]	98	[GO TO NEXT &H_TECH/OMCHANGE THEN NEXT Q]
[Refused]	99	[GO TO NEXT &H_TECH/OMCHANGE THEN NEXT Q]

**[FOR EACH CHANGE – NOT CONTROLS]**

**HI4b.** Thinking about the changes that you made. How much total space did this effect?

ENTER SQUARE FEET	_____	[GO TO NEXT &H_TECH/OMCHANGE THEN NEXT Q]
[Don't know]	-9997	[GO TO NEXT &H_TECH/OMCHANGE THEN NEXT Q]
[Refused]	-9998	[GO TO NEXT &H_TECH/OMCHANGE THEN NEXT Q]

**[ASK FOR EACH CHANGE –NOT CONTROLS]**

**HI4b – HI4l.** What percent of the space served by the &H\_TECH/OMCHANGE falls into each of the following categories?

HI4b	Office/ Professional
HI4c	Warehouse
HI4d	Food sales
HI4e	Health Care
HI4f	Public Assembly
HI4g	Food Service
HI4h	Hotel/Motel/Dorm
HI4i	Retail
HI4j	Service (excluding food)
HI4k	Education
HI4l	Other

[PROGRAMMER: PROGRAM SHOULD VERIFY THAT PERCENTS SUM TO 100%]

## REFRIGERATION

**[IF &REFRIGERATION = TRUE]**

**[FOR EACH REFRIGERATION TECHNOLOGY MENTIONED IN RF2a, ASK RF2c THROUGH RF2i]**

**RF2a.** Which of the following kinds of refrigeration equipment, did you install? [READ LIST]

<b>&amp;RF_TECH</b>	<b>1</b>
Residential Sized Refrigerator	2
Residential Sized Freezer	3
Larger Standard Refrigerator (>30 cf)	4
Self Contained - Coffin/Horizontal Case	5
Self Contained - Vertical Case (multi shelf)	6
Single-Deck display cases - Open single-deck	7
Single-Deck display cases -	8
Multi-Deck (vertical) display cases - Open/reach-in	9
Multi-Deck (vertical) display cases - Glass-door cases	10
Walk-Ins - Freezer/Low Temp	11
Walk-Ins - Cooler/Med Temp	12
Night covers for display cases	13
Strip curtains	14
Glass doors on vertical open display cases	15
Main door cooler/freezer door gaskets	16
Auto closers for coolers/freezers	17
Anti-sweat heat controllers	21
Insulate bare suction pipes	18
Multiplex compressor systems	19
Condensers	20
Floating head pressure controllers	21
Vending machine controllers	77
Other (specify)	88
Refused (skip to RXX)	99
Don't know (99 skip to RXX)	

**RF2b.** Which kinds of refrigeration controls, if any, did you install? [ADD LIST]

**RF2c.** Approximately how many &RF\_TECH did you purchase?

ENTER NUMBER	_____	<a href="#">[GO TO RF2d]</a>
[Don't know]	9997	<a href="#">[GO TO RF2d]</a>

**RF2d.** How many of the &RF\_TECH replaced existing &RF\_TECH units?

ENTER NUMBER	_____	<a href="#">[GO TO RF2f]</a>
[Don't know]	9997	<a href="#">[GO TO RF2f]</a>

**RF2f.** Approximately what was the total size of the units installed to replace existing &RF\_TECH units?

Square footage	_____	<a href="#">[GO TO RF2g]</a>
[Don't know]	9997	<a href="#">[GO TO RF2g]</a>

**RF2g.** [Ask for units]?

ENTER SIZE	_____	ENTER UNITS	_____	[GO TO RF2j]
[Don't know]	-97	Don't know	97	[GO TO RF2h]
[Refused]	-98	Refused	98	[GO TO RF2h]

**RF2h.** Approximately what was the total size of the units installed for new refrigeration capacity [Ask for units]?

ENTER SIZE	_____	ENTER UNITS	_____	[GO TO RF2j]
[Don't know]	-97	Don't know	97	[GO TO RF2j]
[Refused]	-98	Refused	98	[GO TO RF2j]

**RF2j.** How many hours per day is the refrigerator left open, including for stocking and in and out?

ENTER HOURS	_____	[GO TO RF2k]
[Don't know]	-97	[GO TO RF2k]
[Refused]	-98	[GO TO RF2k]

**RF2k.** When the refrigerator/freezer is NOT left open, what is the average traffic through the door per hour (# times opened per hour)?

ENTER	_____	[GO TO RF2l]
[Don't know]	-97	[GO TO RF2l]
[Refused]	-98	[GO TO RF2l]

**RF2l.** Does your &RF\_TECH have strip curtains or another type of insulation?

Yes- Strip Curtains	1	[GO TO RF2c FOR NEXT &RF_TECH]
Yes – Other Type of Insulation [RECORD TYPE _____]	2	[GO TO RF2c FOR NEXT &RF_TECH]
No	3	[GO TO RF2c FOR NEXT &RF_TECH]
[Refused]	-98	[GO TO RF2c FOR NEXT &RF_TECH]
[Don't Know]	-97	[GO TO RF2c FOR NEXT &RF_TECH]



**RESPONSE GRID FOR REFRIGERATION**

	<b>&amp;RF_TECH</b>	<b>Number</b>	<b>RF2d # Replace</b>	<b>RF2e # New Capacity</b>	<b>RF2f Size</b>	<b>RF2g Size units</b>	<b>RF2h Size New Capacity</b>	<b>RF2i Units New Capacity</b>	<b>RF2j Hours Open</b>	<b>RF2k Traffi c</b>	<b>RF2l Insulation</b>
<b>1</b>	Residential Sized Refrigerator										
<b>2</b>	Residential Sized Freezer										
<b>3</b>	Larger Standard Refrigerator (>30 cf)										
<b>4</b>	Self Contained - Coffin/Horizo ntal Case										
<b>5</b>	Self Contained - Vertical Case (multi shelf)										
<b>6</b>	Single-Deck display cases - Open single- deck										
<b>7</b>	Single-Deck display cases -										
<b>8</b>	Multi-Deck (vertical) display cases - Open/reach-in										
<b>9</b>	Multi-Deck (vertical) display cases - Glass-door cases										

<b>10</b>	Walk-Ins - Freezer/Low Temp										
<b>11</b>	Walk-Ins - Cooler/Med Temp										
<b>12</b>	Night covers for display cases										
<b>13</b>	Strip curtains										
<b>14</b>	Glass doors on vertical open display cases										
<b>15</b>	Main door cooler/freezer door gaskets										
<b>16</b>	Auto closers for coolers/freezers										
<b>17</b>	Anti-sweat heat controllers										
<b>21</b>	Insulate bare suction pipes										
<b>18</b>	Multiplex compressor systems										
<b>19</b>	Condensers										
<b>20</b>	Floating head pressure controllers										
<b>21</b>	Vending machine controllers										
<b>77</b>	Other (specify)										
<b>88</b>	Refused (skip										

	to RXX)										
<b>99</b>	Don't know (99 skip to RXX)										

**[ASK RF3d – RF3f FOR EACH MEASURED IDENTIFIED IN RF2a]**

**RF3d.** What year was the old equipment removed?

2008	1	[GO TO RF3e]
2009	2	[GO TO RF3e]
2010	3	[GO TO RF3e]
2011	4	[GO TO RF3e]
[Refused]	-98	[GO TO RF3e]
[Don't Know]	-97	[GO TO RF3e]

**RF3e** On average, how old was the removed equipment?

<b>1</b>	Less than 5 years old	1 [GO TO RF3f]
<b>2</b>	Between 5 and 10 years old	2 [GO TO RF3f]
<b>3</b>	10 to 20 years old	3 [GO TO RF3f]
<b>4</b>	More than 20 years old	4 [GO TO RF3f]
<b>-98</b>	[Refused]	-98 [GO TO RF3f]
<b>-97</b>	[Don't know]	-97 [GO TO RF3f]

**RF3f.** What percent of the removed &RF\_TECH capacity was disposed of using the following methods?

Never removed equipment	1	[GO TO RF3a FOR NEXT &RF_TECH]
Sent to a landfill	2	[GO TO RF3a FOR NEXT &RF_TECH]
Moved to another location of our firm	3	[GO TO RF3a FOR NEXT &RF_TECH]
Sold or given to another firm or residence for use	4	[GO TO RF3a FOR NEXT &RF_TECH]
Recycled or sold for scrap	5	[GO TO RF3a FOR NEXT &RF_TECH]
Refused	-97	[GO TO RF3a FOR NEXT &RF_TECH]
Don't know	-98	[GO TO RF3a FOR NEXT &RF_TECH]

**RESPONSE GRID FOR REFRIGERATION**

	<b>&amp;RF_TECH</b>	<b>RF3d Year removed</b>	<b>RF3e Age</b>	<b>RF3f Percent not removed</b>	<b>RF3f Percent Landfill</b>	<b>RF3f Percent Moved</b>	<b>RF3f Percent Sold</b>	<b>RF3f Percent Scrapped</b>
<b>1</b>	Residential Sized Refrigerator							
<b>2</b>	Residential Sized Freezer							
<b>3</b>	Larger Standard Refrigerator (>30 cf)							
<b>4</b>	Self Contained - Coffin/Horizontal Case							
<b>5</b>	Self Contained - Vertical Case (multi shelf)							
<b>6</b>	Single-Deck display cases - Open single-deck							
<b>7</b>	Single-Deck display cases -							
<b>8</b>	Multi-Deck (vertical) display cases - Open/reach-in							
<b>9</b>	Multi-Deck (vertical) display cases - Glass-door cases							
<b>10</b>	Walk-Ins - Freezer/Low Temp							
<b>11</b>	Walk-Ins - Cooler/Med Temp							
<b>77</b>	Other (specify)							
<b>-98</b>	Refused (skip to RXX)							

<b>-97</b>	Don't know (99 skip to RXX)							
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**REFRIGERATION COSTS/BACK UP FOR ATTRIBUTION**

**[ASK IF OP1=1]**

**ATR1d.** For your refrigeration projects, what percentage of the total costs of the project were covered by the financial support that you received?

	<b>ATR1</b>
<b>Measure type</b>	<b>% of Total</b>
<b>Refrigeration</b>	
<b>[Don't know]</b>	
<b>[Refused]</b>	

**REFRIGERATION OPERATIONS AND MAINTENANCE CHANGES**

**ROP1.** Did you make any other changes to the operation and maintenance of your refrigeration systems?

Yes	1	<a href="#">[GO TO ROP2]</a>
No	2	<a href="#">[GO TO NEXT SECTION]</a>
Don't know	97	<a href="#">[GO TO NEXT SECTION]</a>
Refused	98	<a href="#">[GO TO NEXT SECTION]</a>

**ROP2.** What changes did you make? **[OPEN END]**

OPEN END (Specify. Probe for specific equipment and number affected as well as a description of effects)	1	<a href="#">[GO TO ROP3]</a>
Don't know	97	<a href="#">[GO TO ROP3]</a>
Refused	98	<a href="#">[GO TO ROP3]</a>

**REFRIGERATION –ALL CHANGES**

**You stated that you [read in &R\_TECH or “made a change to your operations and maintenance”]**

**[FOR EACH CHANGE]**

**RI4a.** Do you remember when you made this change?

MONTH	_____	<a href="#">[GO TO NEXT &amp;R_TECH/OMCHANGE THEN NEXT Q]</a>
YEAR	_____	<a href="#">[GO TO NEXT &amp;R_TECH/OMCHANGE THEN NEXT Q]</a>
[Don't know]	98	<a href="#">[GO TO NEXT &amp;R_TECH/OMCHANGE THEN NEXT Q]</a>
[Refused]	99	<a href="#">[GO TO NEXT &amp;R_TECH/OMCHANGE THEN NEXT Q]</a>

**MOTORS BATTERY**

**[IF & MEASURE = MOTOR]**

**You mentioned that you installed or made changes to motors.**

**MT2a.** How many electric motors did you purchase and install?

[ENTER NUMBER]	_____	
[Don't know]	97	[GO TO NEXT TECHNOLOGY]
[Refused]	98	[GO TO NEXT TECHNOLOGY]

**[FOR EACH HORSEPOWER CATEGORY IN GRID MT1, ASK MT2b –MT2g]**

**MT2c.** Approximately what percentage of the total number of motors that you purchased are between &LHP and &HHP?

[ENTER NUMBER]	_____	[GO TO NEXT Q]
[Don't know]	-97	[GO TO NEXT Q]
[Refused]	-98	[GO TO NEXT Q]

**MT2d.** How many of the motors between &LHP and &HHP that you purchased were used to operate additional (new) equipment rather than replacing an existing motor?

[ENTER NUMBER]	_____	[GO TO NEXT Q]
[Don't know]	-97	[GO TO NEXT Q]
[Refused]	-98	[GO TO NEXT Q]

**MT2e.** How many of the motors between &LHP and &HHP that you purchased were put into storage and not installed? Your best approximation is fine.

[ENTER NUMBER]	_____	[GO TO NEXT Q]
[Don't know]	-97	[GO TO NEXT Q]
[Refused]	-98	[GO TO NEXT Q]

**MT2f.** How many of the motors between &LHP and &HHP were fitted with variable frequency drives? Your best approximation is fine.

[ENTER NUMBER]	_____	[GO TO NEXT Q]
[Don't know]	-97	[GO TO NEXT Q]
[Refused]	-98	[GO TO NEXT Q]

**READ:** In this survey we use the term “NEMA Premium motors” to refer to very high efficiency motors that meet specific performance criteria developed by the National Electrical Manufacturers Association.

**MT2g.** How many of the motors between &LHP and &HHP that you installed were NEMA Premium motors or were characterized as “premium efficiency” motors by your motor vendor?

[ENTER NUMBER]	_____	[GO TO MT3a]
[Don't know]	-97	[GO TO MT3a]
[Refused]	-98	[GO TO MT3a]



**RESPONSE GRID FOR MOTORS**

	MT HP Category	MT2a How Many	MT 2c % by HP Category	MT2d New Construction	MT2e Put in Storage	MT 2f # w/ VFDs	MT 2g # NEMA Premium
	All						
1	1-5						
2	6-20						
3	21 – 50						
4	51- 100						
5	101 – 200						
6	200 – 500						

**REPLACEMENT/BASELINE EFFICIENCY:**

**NOTE: GIVEN THAT THE EPACT 1992 STANDARDS WENT INTO EFFECT IN 1997, WE WILL ASSUME THAT MOTORS REPLACED MET EPACT 1992 STANDARDS UNLESS THEY HAD BEEN REWOUND, IN WHICH CASE WE WILL ASSUME THEY WERE PRE-EPACT STANDARD MOTORS. IF RESPONDENT CANNOT PROVIDE ANSWERS BY HP CATEGORY, ACCEPT ANSWERS FOR ALL MOTORS.**

**MT3a.** How many motors between &LHP and &HHP did you remove and replace?

[ENTER NUMBER]	_____	[GO TO MT3b]
[Don't know]	-97	[GO TO MT3c]
[Refused]	-98	[GO TO MT3c]

**MT3b.** And how many of those motors between &LHP and &HHP had been rewound?

[ENTER NUMBER] <996 FOR ALL OR 0 FOR NONE >	_____	[GO TO MT3c]
[Don't know]	-97	[GO TO MT3c]
[Refused]	-98	[GO TO MT3c]

**MT3c.** What kind of equipment do motors in this horsepower category drive in your facility?  
**[PICK LIST OF MOTOR APPLICATIONS – SELECT ALL THAT APPLY]**

HVAC equipment	1
Pump	2
Fan	3
Air Compressor	4
Conveyor belt or other materials handling	5
Production <u>process</u> machinery	6
Other (specify)	77
[Refused]	-98
[Don't Know]	-97

**RESPONSE GRID MT3**

	MT HP Category	MT3a # Motors Replaced	MT3b # Motors Rewound	MT 3c 1 Equipt Driven	MT 3c 2 Equipt Driven	MT 3c 3 Equipt Driven	MT 3c 4 Equipt Driven	MT 3c 5 Equipt Driven	MT 3c 6 Equipt Driven
1	1-5								
2	6-20								
3	21 – 50								
4	51- 100								
5	101 – 200								
6	200 – 500								
7	All motors								

**HOURS OF OPERATION**

**NOTE: FOR MOTORS ATTACHED TO HVAC EQUIPMENT, WE WILL USE FULL LOAD HOURS ESTIMATES IN TECHNICAL RESOURCE MANUALS. THESE QUESTIONS ARE DESIGNED TO PROBE OPERATING HOURS FOR MOTORS THAT OPERATE PRODUCTION EQUIPMENT.**

**IF ANY MT3c = 2 – 77, ASK MT4 SEQUENCE, ELSE SKIP NEXT TECHNOLOGY.**

**READ:** Now I would like to ask you a few questions about the hours of operation for motors that drive machinery **other than heating, cooling, and ventilation**. This would include industrial process machinery, pumps used for industrial processes or wastewater systems, compressed air systems, and material handling systems.

**MT4a.** In the past month, how many hours per day did this &MT3c equipment typically operate?

[RECORD HOURS]	_____	[GO TO MT4b]
Refused	-98	[GO TO MT4b]
Don't Know	-97	[GO TO MT4b]

<b>MT4b.</b> And how many days per week?[RECORD DAYS]	_____	[GO TO MT4c]
Refused	-98	[GO TO MT4c]
Don't Know	-97	[GO TO MT4c]

**MT4c.** Are there any months during the year when the operating schedule for this equipment differs significantly from what you just described?

Yes	1	[GO TO MT4d]
-----	---	--------------

No	2	<a href="#">[GO TO MT3a FOR NEXT MT3c]</a>
Refused	-98	<a href="#">[GO TO MT3a FOR NEXT MT3c]</a>
Don't know	-97	<a href="#">[GO TO MT3a FOR NEXT MT3c]</a>

<b>MT4d.</b> How many hours per day does the <b>MT3c</b> equipment typically operate during the periods with different operating schedules?[RECORD HOURS]	_____ <a href="#">[GO TO MT4e]</a>
[Refused]	98 <a href="#">[GO TO MT4e]</a>
[Don't Know]	97 <a href="#">[GO TO MT4e]</a>

<b>MT4e.</b> And how many days per week does the equipment typically operate during the periods with different operating schedules? [RECORD DAYS]	_____ <a href="#">[GO TO MT4f]</a>
[Refused]	98 <a href="#">[GO TO MT4f]</a>
[Don't Know]	97 <a href="#">[GO TO MT4f]</a>

<b>MT4f.</b> How many months per year does the equipment run on the alternative schedule? [RECORD DAYS]	_____	<a href="#">[GO TO MT4a FOR NEXT MT3c]</a>
[Refused]	98	<a href="#">[GO TO MT4a FOR NEXT MT3c]</a>
[Don't Know]	97	<a href="#">[GO TO MT4a FOR NEXT MT3c]</a>

**RESPONSE GRID MOTORS**

	<b>Equipment Category</b>	<b>MT4a Hours per day</b>	<b>MT4b Days per week</b>	<b>MT 4c 1 Months diff sched</b>	<b>MT 4d Hours per day diff sched</b>	<b>MT 4e Days per week diff sched</b>	<b>MT 3f Months per year diff sched</b>
1	Pump						
2	Fan						
3	Air Compressor						
4	Conveyor belt or other materials handling						
5	Production process machinery						
6	Other (specify)						

**MOTOR COSTS/WILL BE BACK-UP FOR ATTRIBUTION**

[ASK IF OP1=1]

**ATR1d.** For your motor projects, what percentage of the total costs of the project were covered by the financial support that you received?

	ATR1
Measure type	% of Total
Motor	
[Don't know]	
[Refused]	

**MOTORS –ALL CHANGES**

You stated that you [read in &M\_TECH or “made a change to your operations and maintenance”]

[FOR EACH CHANGE]

**MI4a.** Do you remember when you made this change?

MONTH	_____	[GO TO NEXT &M_TECH/OMCHANGE THEN NEXT Q]
YEAR	_____	[GO TO NEXT &M_TECH/OMCHANGE THEN NEXT Q]
[Don't know]	98	[GO TO NEXT &M_TECH/OMCHANGE THEN NEXT Q]
[Refused]	99	[GO TO NEXT &M_TECH/OMCHANGE THEN NEXT Q]

**OTHER CHANGE BATTERY**

[IF &OTHER = TRUE]

**OE2a.** Did you install any other kinds of energy efficiency measures or make any other changes since [&DATE]?

Yes	1	[GO TO OE2b]
No	2	[GO TO NEXT SECTION]
[Refused]	-98	[GO TO NEXT SECTION]
[Don't Know]	-97	[GO TO NEXT SECTION]

**OE2b.** Which kinds of additional measures did you install?

[Open End 1]	1	[GO TO OE2c]
[Open End 2]	2	[GO TO OE2c]
[Open End 3]	3	[GO TO OE2c]
[Don't know]	97	[GO TO NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

**OE2c.** [FOR EACH MEASURE TYPE MENTIONED.] Approximately how many &OE\_TECH did you purchase?

[OE2c _Open End 1]	___	[GO TO OE2d]
[OE2c _Open End 2]	___	[GO TO OE2d]
[OE2c _Open End 3]	___	[GO TO OE2d]
[Don't know]	97	[GO TO OE2d]
[Refused]	98	[GO TO OE2d]

**OE2d.** Approximately what percentage of your facility's total square footage was served by these changes?

Square Footage	_____	[GO TO OE2e]
[Don't know]	97	[GO TO OE2e]
[Refused]	98	[GO TO OE2e]

**OE2e.** How many of the &OE\_TECH purchased were used to replace existing &OE\_TECH units?

Numeric Open End	___	[GO TO OE3]
[Don't know]	97	[GO TO OE3]
[Refused]	98	[GO TO OE3]

**RESPONSE GRID FOR OTHER**

	<b>OE_TECH</b>	<b>How many</b>	<b>Sq. Footage</b>	<b>Replacement?</b>
1	Specify:			
2	Specify:			
3	Specify:			
4	Specify:			
5	Specify:			
6	Specify:			

**[FOR EACH MEASURE TYPE REPORTED where OE2e > 0, ASK OE3]**

**OE3.** What types of equipment were replaced when installing &OE\_TECH

None/New construction	1	[GO TO OE3 FOR NEXT &OE_TECH]
SPECIFY	_____	[GO TO OE3a]
Don't know	-97	[GO TO OE3 FOR NEXT &OE_TECH]
Refused	-98	[GO TO OE3 FOR NEXT &OE_TECH]

**[FOR EACH EQUIPMENT TYPE REPLACED, ASK OE3a]**

**OE3a.** Did you remove the same amount of &OE\_TECH as you installed through the project?

Yes	1	[GO TO OE3d]
No	2	[GO TO OE3b]
Refused]	-98	[GO TO OE3d]
[Don't Know]	-97	[GO TO OE3d]

**OE3b.** Did you remove more or less &OE\_TECH than you installed through the project?

More	1	[GO TO OE3c]
Fewer	2	[GO TO OE3c]
[Refused]	-98	[GO TO OE3d]
[Don't Know]	-97	[GO TO OE3d]

**OE3c.** How much more/less &OE\_TECH did you install?

[ENTER NUMBER]	_____	[GO TO OE3d]
Don't know	-97	[OE3d]
Refused	-98	[OE3d]

**OE3d.** What was the condition of the removed equipment?

Inoperable (broken)	1	[GO TO OE3e]
Poor condition	2	[GO TO OE3e]
Fair condition	3	[GO TO OE3e]
Good condition	4	[GO TO OE3e]
Refused	-98	[GO TO OE3e]
Don't know	-97	[GO TO OE3e]

**OE3e.** How old was the removed equipment?

Less than 5 years old	1	[GO TO NEXT SECTION]
Between 5 and 10 years old	2	[GO TO NEXT SECTION]
10 to 20 years old	3	[GO TO NEXT SECTION]
More than 20 years old	4	[GO TO NEXT SECTION]
Refused	-98	[GO TO NEXT SECTION]
Don't know	-97	[GO TO NEXT SECTION]

**RESPONSE GRID OTHER REPLACED**

		<b>OE3a</b>	<b>OE3b</b>	<b>OE3c</b>	<b>OE3d</b>	<b>OE3e</b>
--	--	-------------	-------------	-------------	-------------	-------------

	OE3	Remove same amount	Remove more or less	Amount removed	Condition removed equip	Age removed equip
1	Specify:					
2	Specify:					
3	Specify:					
4	Specify:					
5	Specify:					
6	Specify:					

**OTHER COSTS/WILL BE BACK-UP FOR ATTRIBUTION**

[ASK IF OP1=1]

**ATR1e.** For these additional projects, what percentage of the total costs of the project were covered by the financial support that you received?

	ATR1
Measure type	% of Total
Other	
[Don't know]	
[Refused]	

**OTHER –ALL CHANGES**

You stated that you [read in &OE\_TECH]

[FOR EACH CHANGE]

**OI4a.** Do you remember when you made this change?

MONTH	_____	[GO TO NEXT &OE_TECH THEN NEXT Q]
YEAR	_____	[GO TO NEXT &OE_TECH THEN NEXT Q]
[Don't know]	98	[GO TO NEXT &OE_TECH THEN NEXT Q]
[Refused]	99	[GO TO NEXT &OE_TECH THEN NEXT Q]

**DIRECT ATTRIBUTION**

Now, I'd like to ask you a few questions about the effect that the [&WORKSHOP/DEMONSTRATION/TRAINING]/ [&TECHNICAL ASSISTANCE] had on your organization's decision to undertake the project we have been discussing.

[FOR EACH MEASURE GROUP COVERED ABOVE REPEAT DA0 THROUGH DA]

**DA0.** Without the &SPONSOR [&WORKSHOP/DEMONSTRATION/TRAINING/&TECHNICAL ASSISTANCE], would you say the likelihood of [installing / performing] the &ACTION was... [READ LIST]

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
<b>Very likely</b>	1	1	1	1
<b>Somewhat likely</b>	2	2	2	2
<b>Not very likely</b>	3	3	3	3
<b>Or very unlikely</b>	4	4	4	4
[Don't know]	-97	-97	-97	-97
[Refused]	-98	-98	-98	-98

**TIMING**

**ASK TIMING QUESTIONS ONLY FOR MEASURES WHERE DAT0 = 1 OR 2 (VERY LIKELY OR SOMEWHAT LIKELY TO HAVE IMPLEMENTED IN THE ABSENCE OF THE PROGRAM).**

AT11a. I'd like to know about the effect, if any, that [&WORKSHOP/DEMONSTRATION/TRAINING or &TECHNICALASSISTANCE] had on the timing of your project. Without attending the [&WORKSHOP/DEMONSTRATION/TRAINING or &TECHNICALASSISTANCE], would you have implemented &MEASURE at the same time as you actually did through the project, earlier than you did, later than you did ... or would you not have installed the measure at all?



RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
<b>Same time</b>	1	1	1	1
<b>Earlier</b>	2	2	2	2
<b>Later</b>	3	3	3	3
<b>Would never have installed</b>	4	4	4	4
[Don't know]	-97	-97	-97	-97
[Refused]	-98	-98	-98	-98

**[IF DAT1a ≠ LATER, SKIP]**

**AT11b.** Approximately how many months later?  
 [Try to get a number. Try bracketing if necessary by beginning with more or less than four years later.]

	DAT1b_&MEASURE
[RECORD # OF MONTHS]	_____
[Don't know]	-97

**EFFICIENCY**

This section applies for any measure where there is a standard efficiency option. For example, variable frequency drives do not have a “standard efficiency” option, so you should skip this section for VFDs even though installing a VFD will result in energy savings. Heat recovery, lighting controls, and steam trap replacement also fall into this category. Circle “5” not applicable for the measure in the table below and skip to DAT3.

**ASK EFFICIENCY QUESTIONS ONLY FOR MEASURES WHERE DAT0 = 1 OR 2 (VERY LIKELY OR SOMEWHAT LIKELY TO HAVE IMPLEMENTED IN THE ABSENCE OF THE PROGRAM).**

**AE1a.** Without the [&WORKSHOP/DEMONSTRATION/TRAINING or &TECHNICALASSISTANCE] would you have installed &MEASURE of the exact same energy efficiency as t the equipment you installed you installed, or would you have installed lower efficiency, or higher efficiency equipment?

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
<b>Same</b>	1	1	1	1
<b>Lower</b>	2 [ASK AE2b]	2 [ASK AE2b]	2 [ASK AE2b]	2 [ASK AE2b]
<b>Higher</b>	3	3	3	3
[Not applicable]	-88	-88	-88	-88
[Don't know]	-97	-97	-97	-97
[Refused]	-98	-98	-98	-98

**AE1b.** Why do you say that? [RECORD VERBATIM]: \_\_\_\_\_

**[IF AE1a ≠ LOWER, SKIP TO AQ1.]**

**AE2.** Without the [&WORKSHOP/DEMONSTRATION/TRAINING or &TECHNICALASSISTANCE], would you have installed <measure> that was:

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
<b>Standard efficiency or according to code</b>	1	1	1	1
<b>Slightly higher than standard efficiency</b>	2	2	2	2
<b>Between standard efficiency and the efficiency that was installed</b>	3	3	3	3
<b>Slightly lower than the high efficiency that was installed</b>	4	4	4	4
[Don't know]	-97	-97	-97	-97
[Refused]	-98	-98	-98	-98

## QUANTITY

**ASK QUANTITY QUESTIONS ONLY FOR MEASURES WHERE DAT0 = 1 OR 2 (VERY LIKELY OR SOMEWHAT LIKELY TO HAVE IMPLEMENTED IN THE ABSENCE OF THE PROGRAM.**

**Finally, I'd like to know about the effect, if any, that your participation in the [&WORKSHOP/DEMONSTRATION/TRAINING or &TECHNICALASSISTANCE] had on the scale of the project you completed.**

**AQ1a.** Without the support from [&WORKSHOP/DEMONSTRATION/TRAINING or &TECHNICALASSISTANCE] would you have installed more or/a larger sized <measure>, less, about the same amount, or would you not have installed any quantity of the measure at all?

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
Same amount	1	1	1	1
Less or smaller	2 [READ AQ3a]	2 [READ AQ3a]	2 [READ AQ3a]	2 [READ AQ3a]
More or larger	3 [READ AQ3a]	3 [READ AQ3a]	3 [READ AQ3a]	3 [READ AQ3a]
Would not have installed any	4	4	4	4
[Not Applicable]	5	5	5	5
[Don't know]	-97	-97	-97	-97
[Refused]	-98	-98	-98	-98

**AQ1b.** Why do you say that? **[RECORD VERBATIM]**\_\_\_\_\_

**[IF AQ1 = SAME or NOT INSTALLED ANY, SKIP TO OP5]**

**AQ3a.** By what percentage do you think you increased or decreased the amount of <&MEASURE installed?

Calculate percent:  $\text{abs}([(amount\ installed) / (amount\ would\ have\ installed)] - 100\%)$

The response can be greater or less than 100 percent. Two examples:

- Example 1. Organization installed 8, but would have installed 2 without the program. Change is 300 percent.
- Example 2. Organization installed 4, would have installed 3 without the program. Change is 33 percent.

Record a positive % even if they decreased the amount that they installed.

- Example 3. Organization installed 8 but would have installed 10 w/out the program. Change is 20 percent.
- Example 4. Organization installed 4 but would have installed 6 without the program. Change is 33 percent.

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
[RECORD %]	_____ %	_____ %	_____ %	_____ %
Don't know	-97	-97	-97	-97
Refused	-98	-98	-98	-98

**OVERALL INFLUENCE CHECK IF RECEIVED FUNDING FROM ANY SOURCE**

*This battery has been shortened from the retrofit survey given that this survey is for an information or technical assistance effort that does not offer incentives. Will just be used to over context to overall attribution.*

**[ASK ONLY IF OP1=1]**

**OP9.** In your opinion, was the &SPONSOR’s [&WORKSHOP/DEMONSTRATION/TRAINING/ &TECHNICAL ASSISTANCE], more important in encouraging and enabling [your organization] to carry out the energy efficiency project we have been discussing; was the rebate more important; or were they both equally important?

SEP PA &WORKSHOP/DEMONSTRATION/TRAINING/&TRAINING	1
Rebate	2
Both equally important	3
[Don’t know]	-97
[Refused]	-98

**OP10** Why do you say that?

**[RECORD VERBATIM]** \_\_\_\_\_

**ATTRIBUTION – MARKET CONTEXT**

**TRAINING OBJECTIVES**

**TO1.** The [&WORKSHOP/DEMONSTRATION/TRAINING/ &TECHNICAL ASSISTANCE], was designed to achieve the following objectives: &USE COURSE SPECIFIC BELOW.

**NOTE: WE WILL PROVIDE COURSE SPECIFICS BASED UPON A REVIEW OF CURRICULA, PARTICIPANT DATABASES AND INPUTS FROM INSTRUCTOR SURVEY DATA.**

**[INSERT TWO SENTENCE OR LESS DESCRIPTIONS OF EACH SPECIFIC EFFORT]**

**TO2.** Prior to taking this course, had you searched for courses with similar curricula content?

[Yes]	1	<a href="#">[GO TO TO3]</a>
[No]	2	<a href="#">[GO TO KA1]</a>
[Don’t know]	98	<a href="#">[GO TO KA1]</a>
[Refused]	99	<a href="#">[GO TO KA1]</a>

**TO3.** Using a scale of 1 to 10 where 1 is no courses available and 10 is many courses available, how would you rate the availability of courses with similar curricula prior to &DATE?

None Available	1	[GO TO KA1]
	2	[GO TO KA1]
	3	[GO TO KA1]
	4	[GO TO KA1]
	5	[GO TO KA1]
	6	[GO TO KA1]
	7	[GO TO KA1]
	8	[GO TO KA1]
	9	[GO TO KA1]
Many Available	10	[GO TO KA1]
Don't know	98	[GO TO KA1]
Refused	99	[GO TO KA1]

**KNOWLEDGE AND AWARENESS EFFECTS**

**NOTE: IN THIS SECTION, WE IDENTIFY ANY CHANGES TO KNOWLEDGE AND AWARENESS AS A RESULT OF PARTICIPATION IN THE COURSE. NOTABLY, THIS SECTION WILL GATHER INFORMATION TO UNDERSTAND OTHER EFFECTS OF THE SEP TRAINING EFFORTS.**

**KA1.** Did the [&WORKSHOP/DEMONSTRATION/TRAINING/ &TECHNICAL ASSISTANCE], provide you with any new information?

[Yes]	1	[GO TO KA2a]
[No]	2	[GO TO KA2a]
[Don't know]	98	[GO TO KA2a]
[Refused]	99	[GO TO KA2a]

**KA2a.** Using a scale of 1 to 10 where 1 is no knowledge and 10 is significant knowledge, how would you rate your level of knowledge regarding the [&WORKSHOP/DEMONSTRATION/TRAINING/ &TECHNICAL ASSISTANCE], objectives prior to your participation in &DATE?

No Knowledge	1	[GO TO KA2b]
	2	[GO TO KA2b]
	3	[GO TO KA2b]
	4	[GO TO KA2b]
	5	[GO TO KA2b]
	6	[GO TO KA2b]
	7	[GO TO KA2b]
	8	[GO TO KA2b]
	9	[GO TO KA2b]
Significant Knowledge	10	[GO TO KA2b]
Don't know	98	[GO TO KA2b]
Refused	99	[GO TO KA2b]

**[SKIP IF KA1=2]**

**KA2b.** On the same scale, how would you rate your [&WORKSHOP/DEMONSTRATION/TRAINING/ &TECHNICAL ASSISTANCE], objectives knowledge after your participation?

No Knowledge	1	[GO TO KA3]
	2	[GO TO KA3]
	3	[GO TO KA3]
	4	[GO TO KA3]
	5	[GO TO KA3]
	6	[GO TO KA3]
	7	[GO TO KA3]
	8	[GO TO KA3]
	9	[GO TO KA3]
Significant Knowledge	10	[GO TO KA3]
Don't know	98	[GO TO KA3]
Refused	99	[GO TO KA3]

**KA3.** Did the [&WORKSHOP/DEMONSTRATION/TRAINING/ &TECHNICAL ASSISTANCE] increase your awareness of ways to improve the energy efficiency at your &INSERT HOME, FACILITY, JOBS, CLASSROOM?

[Yes]	1	[GO TO KA4]
[No]	2	[GO TO KA4]
[Don't know]	98	[GO TO KA4]
[Refused]	99	[GO TO KA4]

**KA4.** Did your participation in the [&WORKSHOP/DEMONSTRATION/TRAINING/ &TECHNICAL ASSISTANCE], make you more likely to take energy saving actions?

[Yes]	1	[GO TO FIN1]
[No]	2	[GO TO FIN1]
[Don't know]	98	[GO TO FIN1]
[Refused]	99	[GO TO FIN1]

**CAPACITY BUILDING**

**NOTE: IN THIS SECTION, WE IDENTIFY ANY CAPACITY BUILDING THAT RESULTED FROM PARTICIPATION IN THE COURSE. NOTABLY, THIS SECTION WILL GATHER INFORMATION TO UNDERSTAND OTHER EFFECTS OF THE SEP TRAINING EFFORTS. THESE QUESTIONS WILL REFLECT FINDINGS FROM INSTRUCTOR INTERVIEWS.**

**[ASK IF AC1=2, 3, ELSE ASK BC1]**

**CPC2.** Please tell me if you would agree with any of the following statements. As a result of the [&WORKSHOP/DEMONSTRATION/TRAINING/ &TECHNICAL ASSISTANCE]

**CPC2a.** I have acquired additional energy efficiency skills that I can apply at my facility or the facilities I manage.

**CPC2b.** I have received a certification or accreditation that is relevant to my profession.

**CPC2c.** I have shared the information with colleagues or decision makers at my job.

**CPC2d.** The quality of the maintenance and operation of energy efficient equipment at my business has increased as a result of participating in the &TRAINING/WORKSHOP.

**CPC2e.** I have received access to financing sources to facilitate energy efficient/renewable energy offerings for my clients.

**CPC2f.** &INSERT TRAINING SPECIFIC CAPACITY AREA

	CAPACITY BUILDING	CPC2a EE Skills	CPC2b Certification	CPC2c Shared Info	CPC2d Maintenance	CPC2e Financing	CPC2f &INSERT TRAINING SPECIFIC CAPACITY AREA
1	Yes						
2	Somewhat agree						
3	No						
5	[Don't know]						
6	[Refused]						

**[ASK IF CPM2a-f <3]**

**CPM2.** You indicated that you agreed with &[READ IN CPM2a-f]. How specifically did the &WORKSHOP/DEMONSTRATION/TRAINING/CERTIFICATION/&TECHNICAL ASSISTANCE allow you to &[READ IN CPM2a-f]?

**BUILDING CHARACTERISTICS**

Now I'd like to ask you some questions about your facility or the facilities that you have been discussing.

**BC1.** How many square feet is your facility (or facilities) in which these projects occurred?

	Square feet	<a href="#">[GO TO BC3]</a>
-97	Refused	-98
-98	Don't know	-97

**BC2.** Would you say that the heated or cooled floor area is ...?

Less than 1,500 sq ft	1	[GO TO BC3]
Between 1,500 - 5,000 sq ft	2	[GO TO BC3]
Between 5,000 - 10,000 sq ft	3	[GO TO BC3]
Between 10,000 – 25,000 sq ft	4	[GO TO BC3]
Between 25,000 – 50,000 sq ft	5	[GO TO BC3]
Between 50,000 – 75,000 sq ft	6	[GO TO BC3]
Between 75,000 – 100,000 sq ft	7	[GO TO BC3]
Over 100,000 sq ft	8	[GO TO BC3]
Refused	-98	[GO TO BC3]
Don't know	-97	[GO TO BC3]

**BC3.** Is your space heated using electricity or gas?

Electricity	1	[GO TO BC4]
Gas	2	[GO TO BC4]
Propane	3	[GO TO BC4]
Both electricity and gas	4	[GO TO BC4]
Neither	5	[GO TO BC4]
OPEN\Other-RECORD IF MULTIPLE	6	[GO TO BC4]
Refused	-98	[GO TO BC4]
Don't know	-97	[GO TO BC4]

**BC4.** In what year was your facility built?

Year		[GO TO BC6]
Refused	-98	[GO TO BC5]
Don't know	-97	[GO TO BC5]

*\*Using as a proxy for building envelope.*

**BC5.** If don't know, would you say it was...

After 2000	1	[GO TO NEXT SECTION]
In the 1990's	2	[GO TO NEXT SECTION]
1980s	3	[GO TO NEXT SECTION]
1970s	4	[GO TO NEXT SECTION]
1960s	5	[GO TO NEXT SECTION]
1950	6	[GO TO NEXT SECTION]
Before 1950	7	[GO TO NEXT SECTION]
Refused	-98	[GO TO NEXT SECTION]
Don't know	-97	[GO TO NEXT SECTION]



**FIRMOGRAPHICS**

**FM1.** What is the main business ACTIVITY at your facility or facilities?

Office	1	<a href="#">[GO TO FM2]</a>
Retail (non-food)	2	<a href="#">[GO TO FM2]</a>
College/University	3	<a href="#">[GO TO FM2]</a>
School	4	<a href="#">[GO TO FM2]</a>
Grocery Store	5	<a href="#">[GO TO FM2]</a>
Restaurant	6	<a href="#">[GO TO FM2]</a>
Health Care (other than Hospital)	7	<a href="#">[GO TO FM2]</a>
Hospital	8	<a href="#">[GO TO FM2]</a>
Hotel or Motel	9	<a href="#">[GO TO FM2]</a>
Warehouse	10	<a href="#">[GO TO FM2]</a>
Construction	11	<a href="#">[GO TO FM2]</a>
Community Service/Church/Temple/ Municipality	12	<a href="#">[GO TO FM2]</a>
Industrial Process/ Manufacturing/ Assembly	13	<a href="#">[GO TO FM2]</a>
Condo Assoc./Apartment Mgr.	14	<a href="#">[GO TO FM2]</a>
Greenhouse	15	<a href="#">[GO TO FM2]</a>
Laundry/Cleaners	16	<a href="#">[GO TO FM2]</a>
OPEN\Other - SPECIFY	17	<a href="#">[GO TO FM2]</a>
Refused	-98	<a href="#">[GO TO FM2]</a>
Don't Know	-97	<a href="#">[GO TO FM2]</a>

**FM2.** WHAT IS THE ZIPCODE OF THE BUILDING OR BUILDINGS THAT YOU HAVE BEEN DISCUSSING?

Zip Code (s)	_____	<a href="#">[TERMINATE]</a>
Refused	-98	<a href="#">[TERMINATE]</a>
Don't know	-97	<a href="#">[TERMINATE]</a>