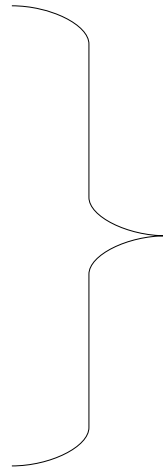
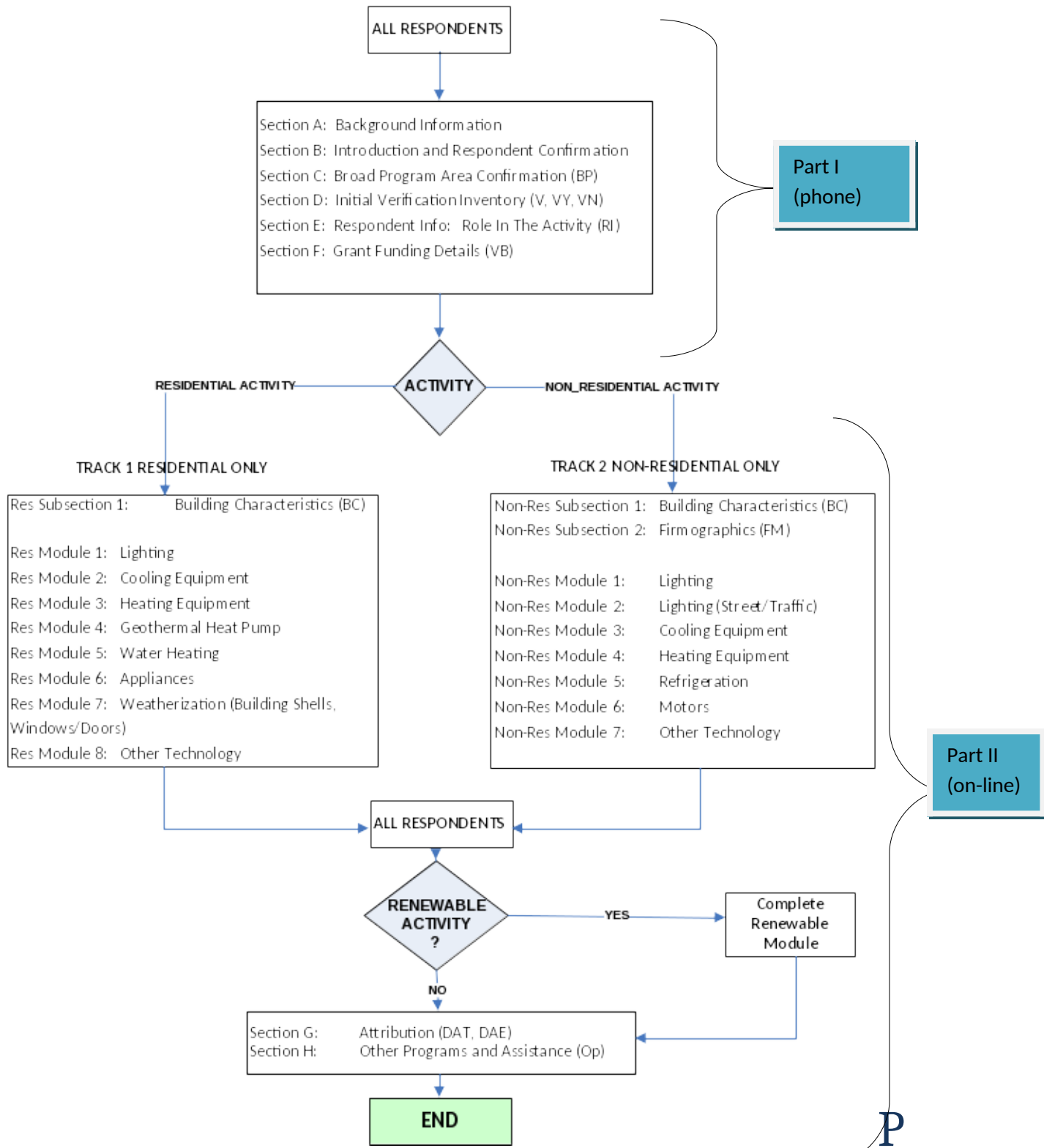


EECBG PROJECT ADMINISTRATOR SURVEY

**OMB CONTROL NO. XXXXXXXX
EXPIRATION DATE MM/DD/YYYY**

National Evaluation of the ARRA Energy Efficiency and Conservation Block Grants (EECBG) Program





Part I: Telephone Survey

SECTION A: BACKGROUND INFORMATION

(To be filled in prior to interview):

PAGE Contact:	
Program Administrator Name:	
Date Application Submitted:	
Broad Program Area (BPA) ("Activity" Field in PAGE)	
Activity Budget	
Project Title	
Description of target markets:	
Activity / Project Administrator Contact Name:	
Contact Company / Organization:	
Contact Phone:	
Contact Disposition:	

SECTION B: INTRODUCTION AND RESPONDENT CONFIRMATION

INITIAL. Hello, this is &INTERVIEWER NAME calling on behalf of the U.S. Department of Energy from [name of subcontractor firm].

May I please speak with &CONTACT, or the person at this location who is most knowledgeable about &PROJECT_TITLE funded by DOE's EECBG program?

[IF NEEDED] This is not a sales call.

[IF NEEDED] This is a survey authorized by the U. S. Department of Energy to collect information on how your EECBG-funded activities have progressed.

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 HI]
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	END CALL; KEEP CONTACT IN REGULAR CALL ORDER
[Refused]	98	THANK & TERMINATE; ASSIGN [REFUSED] AND REMOVE FROM CALL ORDER

INTRO3(99). Thank you for your time.

HI. Who would be the person at this location who is most knowledgeable about &PROJECT_TITLE funded by DOE's EECBG program?

	RECORD NAME AS &CONTACT	[GO TO MAY_I]
[Don't know]	97	[GO TO APPOINT]
[Refused]	98	[GO TO INTRO3(99)]

MAY_I. May I speak with him/her?

Yes	1	[GO TO INTRO3:s]
No	2	[GO TO EXT]
[Don't know]	97	[GO TO EXT]
[Refused]	98	[GO TO EXT]

INTRO3:s. Hello, this is <INTERVIEWER NAME> calling on behalf of the U.S. Department of Energy from [subcontractor].

This is not a sales call. This is a fact-finding survey only. According to our records, your organization conducted or took part in &PROJECT_TITLE funded by DOE's EECBG program.

I was told that you are the person most knowledgeable about this activity conducted under the EECBG Program. Is this correct?

Yes	1	[GO TO PURPOSE]
No	2	[GO TO HI]
No one knows about the program	3	[GO TO INTRO3(99)]
[Don't know]	97	[GO TO HI]
[Refused]	98	[GO TO EXT]

EXT. Is there a phone extension or phone number you recommend we use when we call back?

Yes	1	RECORD EXTENSION OR PHONE NUMBER AS &PHONE; [GO TO APPOINT]
No	2	[GO TO APPOINT]
[Don't know]	97	[GO TO APPOINT]
[Refused]	98	[GO TO APPOINT]

PURPOSE

My name is [INTERVIEWER NAME] from [INTERVIEWER ORGANIZATION]. We have been hired to gather information on efforts to promote energy efficiency that received Energy Efficiency and Conservation Block Grant (EECBG) funding in Program Years 2009-2011. This interview is being conducted as part of an evaluation of the EECBG Program being carried out by KEMA and managed by the Oak Ridge National Laboratory (ORNL) on behalf of the U. S. Department of Energy (DOE).

DOE would like to inform each individual that the information requested here is being solicited under the statutory authority of Title V, Subtitle E, Section 547 of the Energy Independence and Security Act of 2007 (EISA), which authorizes DOE to review and evaluate the performance of entities receiving grants under the EECBG Program. This information is being sought as part of a national evaluation of EECBG, the purpose of which is to reliably quantify Program accomplishments and identify key performance factors influencing the magnitude of EECBG outcomes. 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.

The information from all respondents will be combined for analysis purposes and data will not be released in a way that would reveal an individual respondent. If you prefer not to answer a question, just let me know and we'll go on to the next question. If you have any questions about this study, you may contact Colleen G. Rizy at ORNL (865-574-5189; rizycg@ornl.gov).

We are calling you today to learn about your organization's experience with &PROJECT_TITLE that was funded by EECBG. In talking about &PROJECT_TITLE, we will use the word "Activity" as a general term to refer to the single action or project, or multiple actions or projects, performed under the EECBG grant.

We anticipate that to complete this survey, it will take about 20 minutes of your time today on the phone. Then you'll be directed to a website for completing the remainder of our questions related to your specific grant project; that should take no more than one hour and you won't have to complete it all at once (ie., up to 90 minutes to complete both surveys. In addition, you may need to spend some time gathering information from your records to answer some of the questions in the on-line questionnaire once you get started. When you are done, you'll be asked to submit your survey electronically following the instructions on the website. (Or you can opt to have us call you back to complete the survey on the phone if you prefer.) Either way, depending on the complexity of your grant project and recordkeeping, we anticipate that the overall time you should expect to spend in supporting this evaluation should be no more than three hours over a two week period.

SECTION C: BROAD PROGRAM AREA CONFIRMATION (BP)

BP1. Applicants for EECBG funds had to classify the type of projects that the grant would fund from a set of categories called Broad Program Areas (BPA). Our records indicate that &PROJECT_TITLE was carried out under the following Broad Program Area classification: [hard code from PAGE]

1. Energy Efficiency Retrofits (Includes Building 2. Lighting Retrofits)	[GO TO BP3A]
2. Financial Incentives	[GO TO BP3B]
3. Buildings and Facilities	[GO TO BP3C]
4. Lighting (Street and Traffic)	[GO TO BP3D]
5. On-Site Renewable Technology	[GO TO BP3E]
6. Energy Efficiency & Conservation Strategy	[GO TO BP3F]

Is this correct?

Yes	1	[GO TO indicated above]
No	2	[GO TO BP2]
[Don't know]	97	[GO TO BP2]
[Refused]	98	[GO TO BP4]

BP2. Under which Broad Program Area does &PROJECT_TITLE belong? [READ DEFINITIONS BELOW]

Energy Efficiency Retrofits - This Program Area focuses on the installation of energy efficiency measures in homes, residential buildings, and public sector buildings. This BPA includes building lighting.	1	[GO TO BP3A]
Financial Incentives - This Program Area focuses on financial incentives for energy efficiency, including rebates, financing, loans, third party loans and local bank-guarantee loans	2	[GO TO BP3B]
Buildings and Facilities - This Program Area focuses on architecture, design and engineering activities; Energy Management Systems, and Energy Efficiency Rating and Labeling	3	[GO TO BP3C]
Lighting - This Program Area focuses on the replacement of traffic lighting and street lighting with energy efficient lighting technologies.	4	[GO TO BP3 D]
On-Site Renewable Technology - This Program Area focuses on renewable energy systems and retrofits, training and capacity building associated with these systems	5	[GO TO BP3E]
Energy Efficiency & Conservation Strategy - This Program Area covers a wide	6	[GO TO BP3F]

range of policies and programs being implemented by grant recipients that do not easily fit into other categories		
None of these	7	[READ OTHER 9 BPA CATEGORIES, THANK AND TERMINATE]
[Don't Know]	97	
[Refused]	98	

[If none of the above, READ OTHER 9 BPAC categories, thank and TERMINATE.]

BP3. Within that Broad Program Area, which of the following subareas did &PROJECT_TITLE address? [\[READ CHOICES FOR THE BPA specified, then check all that apply.\]](#)

DOE's Subareas for Broad Program Areas		Check all that apply
Broad Program Area	Key Subareas	
A. EnergyEfficiencyBuilding Retrofits	1. Appliances	[GO TO BP4]
	2. Boiler	[GO TO BP4]
	3. Building Envelope	[GO TO BP4]
	4. Cool Roofing	[GO TO BP4]
	5. Compressed Air	[GO TO BP4]
	6. Fans	[GO TO BP4]
	7. HVAC	[GO TO BP4]
	8. Insulation	[GO TO BP4]
	9. Lighting (Exterior)	[GO TO BP4]
	10. Lighting (Interior)	[GO TO BP4]
	11. Motors	[GO TO BP4]
	12. Process Heat	[GO TO BP4]
	13. Pumps	[GO TO BP4]
	14. Sensors	[GO TO BP4]
	15. Solar Hot Water	[GO TO BP4]
	16. Steam	[GO TO BP4]
	17. Water Heating	[GO TO BP4]
	18. Water Saving	[GO TO BP4]
	19. Other	[GO TO BP4]
B. Financial Incentives	1. Interest Rate Buy-down	[GO TO BP4]
	2. Loan Loss Reserve	[GO TO BP4]
	3. On Bill Financing	[GO TO BP4]
	4. PACE (Property Assessed Clean Energy)	[GO TO BP4]
	5. Performance Contracting	[GO TO BP4]
	6. Power Purchase Agreement	
	7. Rebates: Appliance	[GO TO BP4]
	8. Rebates: Non-Appliance	[GO TO BP4]
	9. Revolving Loan Fund	[GO TO BP4]
	10. Sub-grant	[GO TO BP4]
	11. Tax Credits	[GO TO BP4]
	12. Other	[GO TO BP4]
C. Buildings and Facilities	1. Architecture, Design, and Engineering	[GO TO BP4]
	2. Energy Efficiency Rating and Labeling	[GO TO BP4]
	3. Energy Management Systems	[GO TO BP4]
	4. Measurement and Verification	[GO TO BP4]
D. Lighting	1. Street Lighting	[GO TO BP4]
	2. Traffic Lighting	[GO TO BP4]
E. Renewable Energy	1. Anaerobic Digestion	[GO TO BP4]
	2. Biomass/Biofuel	[GO TO BP4]
	3. Fuel Cells	[GO TO BP4]
	4. Ground Source Geothermal	[GO TO BP4]
	5. Hydropower	[GO TO BP4]
	6. Solar Photovoltaics	[GO TO BP4]

DOE's Subareas for Broad Program Areas		Check all that apply
Broad Program Area	Key Subareas	
	7. Solar Thermal	[GO TO BP4]
	8. Wind Power	[GO TO BP4]
F. Energy Efficiency and Conservation Strategy	1. Training and workshops	[GO TO BP4]
	2. Education and information	[GO TO BP4]
	3. Community Sustainability Plan	[GO TO BP4]
	4. ____	[GO TO BP4]
G. Other	RECORD: ____	[GO TO BP4]
H. [Don't know]	97	
I. [Refused]	98	

BP 4. Did or will this Activity result in the actual installation of energy efficiency measures in any of the following: 1. Home/residence, 2. Residential or non-residential facility, building or buildings, 3. Street/traffic lighting implementation.

Yes	1	[GO TO BP5a]
No	2	[GO TO BP4a]
[Don't know]	97	[GO TO BP4a]
[Refused]	98	[GO TO BP4a]

BP 4a. In order to estimate how much energy was saved from this project, we need to understand what the ultimate effect of the Activity is on buildings or facilities (both residential and non-residential) and/or street/traffic lighting. Which of the following statements best characterize the effect of the Activity under discussion?

The Activity will result in energy savings in buildings or facilities (both residential and non-residential) and/or street/traffic lighting from the direct installation of energy efficiency measures but the measures have not been installed yet.	1	[GO TO BP5a]
The Activity will result in energy savings indirectly by providing education or training information that will lead to energy savings actions.	2	[GO TO BP9]
The Activity was/is intended to result in energy savings either directly or indirectly but did not (i.e., was unsuccessful).	3	[GO TO BP14]
[Don't know]	97	
[Refused]	98	

BP5a. What types of buildings or facilities (both residential and non-residential) and/or street/traffic lighting have/will have energy efficiency measures installed through this Activity? [Check all that apply]

Residential – Single family homes	1
Residential – Multi-family (2-4 units)	2
Large multi-family buildings (5 or more units)	3
Institutional residential facilities (dormitories, nursing homes)	4
Stand-alone buildings (commercial or industrial) [SPECIFY NAICS CODE]	5
Commercial use spaces in larger buildings (portions of larger buildings with multiple floors) [SPECIFY NAICS CODE]	6
Commercial use spaces in strip malls (attached walls) [SPECIFY NAICS CODE]	7
Exterior lighting facilities (Not street or traffic)	8
Lighting (Street and Traffic)	9
Other facility types [Specify _____]	10
[Don't know]	97
[Refused]	98

BP5b. How many buildings or facilities and or street/traffic implementations were/are being treated under this Activity?

One building	1
Several buildings/facilities (How many units? _____)	2
Street/traffic lighting implementations	3
Other _____	_____
None	5
[Don't know]	97
[Refused]	98

BP6. We are trying to calculate energy savings that have resulted from the project activities. In order to do so, we would like to review data that characterizes the equipment or building conditions before and after the completed projects. This information will be held in confidence. Study results are reported only at the national level. Which of the following types of information do you currently have regarding the characteristics of the equipment or building BEFORE and AFTER the project was completed? [Check all that apply]

a. An energy audit report	Y N DK
b. Diagnostic testing results from [BEFORE/AFTER] the project (e.g., blower door, infrared scan or other tests)	Y N DK
c. A description of the characteristics of the old	Y N DK

measures or building features that were removed, replaced or altered through the project	
d. A description of the characteristics of the new measures or building features that were INSTALLED through the project	Y N DK
e. Specific details as to the efficiency levels, age, size and name plate data of old equipment that was REPLACED	Y N DK
f. Specific details as to the efficiency levels, size and name plate data of new equipment that was INSTALLED	Y N DK
g. A job specification, work order or purchase order describing the work performed	Y N DK
[Don't know]	97
[Refused]	98

BP7. May we please have a copy of information and/or data sets?

- a. Yes - Will send now
- b. Yes - Will send later
- c. Not sure - Require approval
- d. No
- e. Other

[\[GO TO V1\]](#)

BP8. Please explain the type of the project that will result in indirect energy savings in homes or residential buildings. [Check all that apply]

Activity	Will lead to energy savings activities	Will <u>not</u> lead to energy savings activities
Training program or workshop for the trades/trade allies	[GO TO BP9a]	[GO TO COMMENT]
Training program or workshop for building operators	[GO TO BP10a]	[GO TO COMMENT]
Educational or information materials for businesses	[GO TO BP11a]	[GO TO COMMENT]
Educational or information materials for households	[GO TO BP11a]	[GO TO COMMENT]
Drafting a community energy plan or sustainability plan	[GO TO BP12a]	[GO TO COMMENT]
Other [Specify]	_____	[GO TO COMMENT]
[Don't know]	[GO TO COMMENT]	[GO TO COMMENT]
[Refused]	[GO TO COMMENT]	[GO TO COMMENT]

BP9a. To whom were you offering the training?

[RECORD RESPONSE]	_____
[Don't know]	97
[Refused]	98

BP9b. What was the employment status of those offered training?

% employed	_____
Percentage under-employed	_____
Percentage unemployed	_____
[Don't know]	97
[Refused]	98

BP9c. How many trainees were reached through the training?

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

BP9d. How many trainees went on to get a full time or part time job related to training?

[RECORD NUMBER] for Full Time jobs	_____
[RECORD NUMBER] for Part Time jobs	_____
[Don't know]	97
[Refused]	98

BP9e. Explain how the project resulted in indirect savings.

[RECORD RESPONSE]	_____
[Don't know]	97
[Refused]	98

BP9f. How much equipment was eventually treated by the audience who received the training?

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

BP9g. How many buildings or facilities were eventually treated by the audience who received the training?

Residential [RECORD NUMBER]	_____
Commercial [RECORD NUMBER]	_____
Industrial [RECORD NUMBER]	_____
[Don't know]	97

[Refused]	98
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BP9h. How much savings is claimed for the Activity either per unit or total?

kWh saved per unit [RECORD NUMBER]	_____
kWh for the Project in Total	
Residential [RECORD NUMBER]	_____
Commercial [RECORD NUMBER]	_____
Industrial [RECORD NUMBER]	_____
[Don't know]	97
[Refused]	98

BP10a. What was the employment status of those offered training?

Employment status	Will lead to energy savings activities
% employed	_____
Percentage under-employed	_____
Percentage unemployed	_____
[Don't know]	97
[Refused]	98

BP10b. How many trainees were reached through the training?

[RECORD NUMBER] For Full Time Jobs	_____
[RECORD NUMBER] For Part Time Jobs	_____
[Don't know]	97
[Refused]	98

BP10c. How many trainees went on to get a job?

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

BP10d. Explain how the project resulted in indirect savings.

[RECORD RESPONSE]	_____
[Don't know]	97
[Refused]	98

BP10e. How much equipment is being treated by the audience that received the training through the EECBG funded project, such that:

a. How much equipment has been treated to date?

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

b. How much equipment is anticipated to be treated when the project is complete?

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

BP10f. How many buildings or facilities are being treated by the audience that received the training, such that:

a. How many building or facilities have been treated to date?

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

b. How many building or facilities are anticipated to be treated when the project is complete?

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

BP10g. How much savings is claimed for the Activity?

kWh saved per unit [RECORD NUMBER]	_____
kWh for the Project in Total	
Residential [RECORD NUMBER]	_____
Commercial [RECORD NUMBER]	_____
Industrial [RECORD NUMBER]	_____
[Don't know]	97
[Refused]	98

BP11a. Which of the following audiences were targeted?

Homeowners	1
Tenants	2
Landlords	3
School children	4
Building or facilities managers	5
Commercial business owners	6
Small business managers or owners	7
Government or institutional employees	8
General community members	9
Other	[explain]
[Don't know]	97
[Refused]	98

BP11b. How was the education or information delivered?

Face to face presentations or workshops (classroom-type setting)	1
Community event or fair	2
Print materials	3
Interactive exercises	4
Electronic media	5
Field trips or demonstrations	6
[Don't know]	97
[Refused]	98

BP11c. Explain how the Activity was expected to result in indirect savings.

BP11d. Where were the savings achieved? [Check all that apply]

Residential buildings	1
Commercial or industrial facilities	2
Institutional or municipal facilities	3
New construction	4
Other	[Explain]
[Don't know]	97
[Refused]	98

BP11e. How much energy savings has been achieved for the Activity?

kWh saved per unit [RECORD NUMBER]	_____
kWh for the Project in Total	
Residential [RECORD NUMBER]	_____
Commercial [RECORD NUMBER]	_____
Industrial [RECORD NUMBER]	_____
Have to look it up and complete later	96
[Don't know]	97
[Refused]	98

BP11f. What is the evidence that has been collected to demonstrate that energy savings were achieved?

An evaluation was conducted by our staff	1
An evaluation was conducted by a third party	2
A survey was done of participants	3
Measurements were made	4
Energy usage data was collection	5
[Don't know]	97
[Refused]	98

BP11g. Short of evidence, what reason do you have to believe that energy efficiency measures were actually installed and savings were achieved?

BP12a. Please describe the target community or entity for which the plan was developed.

Local government (city or town)	1
Local government (county)	2
Regional group	3
Other	4
[Don't know]	97
[Refused]	98

BP12b. Explain how the Activity resulted in indirect savings.

BP12c. Where were the savings achieved?

Residential buildings	1
Commercial or industrial facilities	2
Institutional or municipal facilities	3
New construction	4
Other	[Explain]
[Don't know]	97
[Refused]	98

BP12d. What reason do you have to believe that the savings were achieved?

BP12e. How much savings is claimed for the project?

kWh saved per unit [RECORD NUMBER]	_____
kWh for the Project in Total	
Residential [RECORD NUMBER]	_____
Commercial [RECORD NUMBER]	_____
Industrial [RECORD NUMBER]	_____
[Don't know]	97
[Refused]	98

[\[GO TO V1\]](#)

BP13. Please define the Activity that was/is intended to result in energy savings either directly or indirectly but did not (i.e., was unsuccessful).

BP14. For what reasons do you think this project did not result in energy savings either directly or indirectly (i.e., was unsuccessful)? [Check all that apply]

Project was cancelled	1
The project was not completed/ only partially completed	2
The facility/business closed	3
The equipment/changes made did not perform as expected	4
Lack of adequate training or unsuccessful training	5
Behaviors necessary to achieve the savings did not occur	6
Equipment was faulty or broke	7
Other	[Explain]
[Don't know]	97
[Refused]	98

COMMENT: Thank you for your time.Those are all of the questions I have for you today. [\[TERMINATE; ASSIGN DISPOSITION & REMOVE FROM CALL ORDER\]](#)

SECTION D: INITIAL VERIFICATION INVENTORY (V, VY, VN)

NOTE: THE SEGMENTS VY AND VN ELICIT THE SAME TYPE OF INFORMATION FOR ACTIVITIES SUPPORTED BY THE PROGRAM WITH MEASURE LEVEL DETAIL IN THE TRACKING DATABASE (VY) AND THOSE FOR WHICH MEASURE-LEVEL DATA ARE NOT AVAILABLE (VN). THE ANSWERS TO BOTH SEQUENCES ARE ANSWERED IN THE SAME INITIAL VERIFICATION GRID BELOW. THE OBJECTIVE OF THE INVENTORY IS TO PROVIDE VERIFICATION OF THE OVERALL SCOPE OF THE PROJECT, CHARACTERIZE THE SCOPE OF SUPPORT PROVIDED BY THE EECBG PROGRAM AND OTHER PROGRAMS, AND ELIMINATE THE NEED FOR REPETITIVE QUESTIONS IN THE DETAILED MEASURE SECTIONS.

V1. I'd like to ask you about the scope of the Activity titled &PROJECT_TITLE.

[If necessary: "Activity" means the project, projects or activities that your organization conducted as part of &PROJECT_TITLE.]

SEQUENCE VY: FOR ACTIVITIES WITH MEASURE-LEVEL DETAIL IN THE TRACKING DATABASE OBTAINED IN B6.

[REPEAT THIS SERIES FOR EACH MEASURE IN THE TRACKING DATA]

VY1a. According to EECBG program records, this project involves the installation of, or rebates for, certain energy efficiency measures. For each measure, please verify for me whether this information is correct, and that the measure is part of the Activity. Was &MEASURE part of the project? [REPEAT FOR EACH ONE]

Yes	1	[GO TO VY2e]
No	2	[GO TO VY2a]
[Don't know]	97	[GO TO VY1b.
[Refused]	98	[GO TO VY1a FOR NEXT MEASURE]

VY1b. Can you give me the contact name, phone number, and e-mail of who would know?

Name: _____ E-mail: _____

Contact number: _____

[Go to VY1a for NEXT MEASURE]

VY2a. Why was &MEASURE not installed or rebated? [DO NOT READ, MARK ALL THAT APPLY]

Never planned to install/rebate as part of project	1	[GO TO VY1a FOR NEXT MEASURE]
Project proved to be technically infeasible	2	[GO TO VY2b]
Financial resources were not available	3	[GO TO VY2b]
Still plan to install/rebate, haven't had time to complete	4	[GO TO VY2c]
Other (Specify) _____	—	[GO TO VY2c]
[Don't know]	97	[GO TO VY2c]
[Refused]	98	[GO TO VY2c]

VN2b. Why was &MEASURE_TYPE not installed or rebated? [DO NOT READ, MARK ALL THAT APPLY] [GO TO VN2c.]

Never planned to install/rebate &MEASURE_TYPE	1	[GO TO VY2a FOR NEXT MEASURE]
Proved to be technically infeasible	2	[GO TO VY2c]
Financial resources were not available	3	[GO TO VN2c]
Still plan to install/rebate, haven't had time	4	[GO TO VN2c]
Other (Specify) _____	___	[GO TO VN2c]
[Don't know]	97	[GO TO VN2c]
[Refused]	98	[GO TO VN2c]

VY2c. Do you plan to install or provide rebates for &MEASURE before the grant period expires (June 2012)?

Yes	1	[GO TO VY2e]
No	2	[GO TO VY2d]
[Don't know]	97	[GO TO VY1a FOR NEXT MEASURE]
[Refused]	98	[GO TO VY1a FOR NEXT MEASURE]

VY2d. Why not? _____ GO TO VY1a FOR NEXT MEASURE]

VY2e Which of the following best characterizes the current status of installation, or implementation of rebates, for this measure? [READ LIST]

Complete	1	[GO TO VY1a FOR NEXT MEASURE]
Substantially Complete	2	[GO TO VY1a FOR NEXT MEASURE]
Substantially Incomplete	3	[GO TO VY1a FOR NEXT MEASURE]
Incomplete	4	[GO TO VY1a FOR NEXT MEASURE]
Not begun	5	[GO TO VY1a FOR NEXT MEASURE]
Other (Specify) _____	8	[GO TO VY1a FOR NEXT MEASURE]
[Don't know]	97	[GO TO VY1a FOR NEXT MEASURE]
[Refused]	98	[GO TO VY1a FOR NEXT MEASURE]

[GO TO RI1AFTER COMPLETING VY SEQUENCE FOR ALL MEASURES IN TRACKING DATABASE]

SEQUENCE VN: FOR ACTIVITIES WITH NO MEASURE-LEVEL DETAIL IN THE TRACKING DATABASE.

VN SEQUENCE RESPONSE GRID FOR EECBG SUPPORTED EFFORTS

VN sequence	VN1a	VN1c	VN2a	VN2b	VN2c	VN2d
Measure type	Installed or rebated?	Not Installed or rebated?	Why not installed?	Plan to install or provide rebates by date?	Why not?	Current Status?
Efficiency Measures						
Lighting						
Cooling						
Heating						
Water Heating						
Appliances						
Building Shell/Weatherization (insulation, air/duct sealing, windows/doors)						
Other Efficiency Measures						

[RECORD VERIFIED MEASURES FOR MEASURE SPECIFIC QUESTIONS BELOW. RESPONDENTS WILL ONLY BE ASKED MEASURE SPECIFIC QUESTIONS FOR THOSE THAT WERE INSTALLED OR THAT THEY ARE PLANNING TO INSTALL.

- [&LIGHTING]
- [&LIGHTING STREET AND TRAFFIC]
- [&COOLING]
- [&HEATING]
- [&WATER HEATING]
- [&APPLIANCES]
- [&REFRIGERATION]
- [&BUILDING SHELL/WEATHERIZATION]
- [&MOTORS]
- [&OTHER]

VN1a. Which of the following types of measures were installed or rebated under this project? [\[READ LIST IN THE GRID. MARK ALL THAT APPLY.\]](#)

Lighting	1	[GO TO VN1b]
Lighting (Street/Traffic)		[GO TO VN1b]
Cooling	2	[GO TO VN1b]
Heating	3	[GO TO VN1b]
Water Heating	4	[GO TO VN1b]
Appliances	5	[GO TO VN1b]
Refrigeration	6	[GO TO VN1b]
Building Shell/Weatherization (insulation, air/duct sealing, windows/doors)	7	[GO TO VN1b]
Motors	8	[GO TO VN1b]
Other Efficiency Measures: Please specify _____	9	[GO TO VN1b]
[Don't know]	97	
[Refused]	98	

[\[ASK VN1b FOR EACH MEASURE TYPE IDENTIFIED IN VN1a\]](#)

VN1b. Were there any measures that received EECBG support for &PROJECT_TITLE that have not yet been installed or rebated?

Yes	1	[GO TO VN1c]
No	2	[GO TO RI1]
[Don't know]	97	[GO TO RI1]
[Refused]	98	[GO TO RI1]

VN1c. Which measures or types of measures received EECBG financial support for &PROJECT_TITLE, but have not yet been installed or rebated?[\[MARK ALL THAT APPLY IN LIST IN THE GRID.\]](#)

Lighting	1	[GO TO VN2a]
Cooling	2	[GO TO VN2a]
Heating	3	[GO TO VN2a]
Water Heating	4	[GO TO VN2a]
Appliances	5	[GO TO VN2a]
Building Shell/Weatherization (insulation, air/duct sealing, windows/doors)	6	[GO TO VN2a]
Other Efficiency Measures	7	[GO TO VN2a]

FOR EACH MEASURE TYPE MARKED IN VN1c, ASK VN2a THROUGH VN2c.

VN2a. Why was &MEASURE_TYPE not installed or rebated? [DO NOT READ, MARK ALL THAT APPLY]

Never planned to install/rebate &MEASURE_TYPE	1	[GO TO VN2a FOR NEXT MEASURE]
Proved to be technically infeasible	2	[GO TO VN2b]
Financial resources were not available	3	[GO TO VN2b]
Still plan to install/rebate, haven't had time	4	[GO TO VN2b]
Other (Specify) _____	___	[GO TO VN2b]
[Don't know]	97	[GO TO VN2b]
[Refused]	98	[GO TO VN2b]

VN2b. Do you still plan to install or provide rebates for &MEASURE_TYPE using grant funds?

Yes	1	[GO TO VN2c FOR NEXT MEASURE]
No	2	[GO TO VN2c FOR NEXT MEASURE]
[Don't know]	97	[GO TO VN2c FOR NEXT MEASURE]
[Refused]	98	[GO TO VN2a FOR NEXT MEASURE]

VN2c. Why not? _____ [GO TO VN1a FOR NEXT MEASURE]

VN2d. Which of the following best characterizes the current status of work installation, or implementation of rebates, for this &MEASURE_TYPE?

Complete	1	GO TO VN2a FOR NEXT MEASURE]
Substantially Complete	2	GO TO VN2a FOR NEXT MEASURE]
Substantially Incomplete	3	GO TO VN2a FOR NEXT MEASURE]
Incomplete	4	GO TO VN2a FOR NEXT MEASURE]
Not begun	5	GO TO VN2a FOR NEXT MEASURE]
Other (Specify) _____	___	GO TO VN2a FOR NEXT MEASURE]
[Don't know]	97	GO TO VN2a FOR NEXT MEASURE]
[Refused]	98	GO TO VN2a FOR NEXT MEASURE]

[WHEN FINISHED ADDRESSING ALL MEASURES, CONTINUE TO RI1]

SECTION E: RESPONDENT INFO: ROLE IN THE ACTIVITY (RI)

RI1. Next, I'd like get a little information about you and your role in the project we're discussing. What is your job title?

[RECORD JOB TITLE] _____

RI2. Which of the following best describes your role in making decisions regarding the specific project or actions undertaken as part of the EECBG funded project we are discussing (i.e., the purchase and installation of major energy systems such as lighting, heating, and cooling in households and residential buildings)? [READ OPTIONS, SELECT ONE]

Sole responsibility for decisions	1	[GO TO RI3]
Primary decision-maker among a group that makes decisions	2	[GO TO RI3]
Provide recommendations to decision makers	3	[GO TO RI3]
Not involved in decision making	4	[GO TO RI3]
Something else [SPECIFY ____]	_____	[GO TO RI3]
[Don't know]	97	
[Refused]	98	

RI3. Please check all that apply to your professional background.

[READ OPTIONS, MARK ALL THAT APPLY]

Professional Engineer	1	[GO TO RI4]
Building Engineer	2	[GO TO RI4]
Facilities Manager	3	[GO TO RI4]
Certified Energy Manager	4	[GO TO RI4]
Building Performance Institute or other Certifications	5	[GO TO RI4]
Energy Auditor	6	[GO TO RI4]
Building trades (plumbing, electrical, etc.)	7	[GO TO RI4]
Other ____	_____	[GO TO RI4]
[Don't know]	97	[GO TO RI4]
[Refused]	98	[GO TO RI4]

RI4. How long have you been involved with this project?

From before the project started	1	[GO TO VB1]
Continuously from the start of the project	2	[GO TO VB1]
Intermittently from the start of the project	2	[GO TO VB1]
First half of the project	3	[GO TO VB1]
Second half of the project	4	[GO TO VB1]
Only recently (brief time)	5	[GO TO VB1]
Something else [SPECIFY____]	_____	[GO TO VB1]
[Don't know]	97	[GO TO VB1]
[Refused]	98	[GO TO VB1]

SECTION F: GRANT FUNDING DETAILS (VB)

SEQUENCE VB: DIRECTED TO ALL RESPONDENTS.

VB1. What kinds of assistance and support did your organization receive through EECBG to implement &PROJECT_TITLE? **[DO NOT READ, MARK ALL THAT APPLY. PROMPT IF NEEDED.]**

Financial grant for measures installed or rebated	1	[GO TO VB2]
Subsidy for design or engineering work	2	[GO TO VB2]
Reduced interest loan or loan interest subsidy	3	[GO TO VB2]
Loan guarantee	4	[GO TO VB2]
Assistance in entering into performance contracts	5	[GO TO VB3]
Energy audit or other technical assistance in identifying & characterizing opportunities	6	[GO TO VB3]
Referrals to qualified vendors	7	[GO TO VB3]
General information on energy efficiency opportunities	8	[GO TO VB3]
Technical training	9	[GO TO VB3]
Other (Specify in enough detail to understand the support received to use in attribution analysis) _____	10	[GO TO VB3]
[Don't know]	97	[GO TO VB3]
[Refused]	98	[GO TO VB3]

[IF VB1 INCLUDES 1, 2, 3, OR 4 ASK VB2, ELSE VB3]

VB2. If funding amount is available, ask VB2a, if not, ask VB2b.

VB2a. Is this the correct funding amount: \$xx? If not, what is the correct amount? _____

VB2b. What was the amount of the grant, incentive, subsidy, or loan provided by EECBG for &PROJECT_TITLE? Your best approximation will be fine. [Repeat as needed for each distinct financial assistance based on the response in VB1.]

[RECORD AMOUNT]	\$_____	[GO TO VB3]
[Don't know]	97	[GO TO VB3]
[Refused]	98	[GO TO VB3]

VB3. What was the total overall cost of &PROJECT_TITLE including all costs covered by incentives and all equipment and labor costs *before* any incentives or subsidies were applied? Again, your best approximation of the total cost will be fine.

[RECORD AMOUNT]	\$_____	[GO TO VB3a]
[Don't know]	97	[GO TO VB3a]
[Refused]	98	[GO TO VB3a]

VB3a. Please provide an estimate of the breakdown of this total project cost by the following categories:

[RECORD TOTAL AMOUNT FROM ABOVE VB3]	\$_____ (a + b + c below should =100%)	[GO TO VB4]
a) Equipment, materials and labor related to energy savings portion of project	_____%	
b) Other equipment and materials related to non-energy savings (balance of non-administrative project costs)	_____%	
c) Project administration	_____%	
[Don't know]	97	[GO TO VB4]
[Refused]	98	[GO TO VB4]

[IF MULTIPLE MEASURES INSTALLED ASK VB4 THROUGH VB6, ELSE NEXT SECTION]

VB4. Can you recall how these costs were allocated among the different types of measures installed or rebated?

Yes	1	[GO TO VB5]
No	2	[GO TO NEXT SECTION]
[Don't know]	97	[GO TO NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

VB5. What percentage of the total overall costs of the project supported by &PROGRAM was accounted for by &MEASURE_TYPE?

VB5 RESPONSE GRID

	VB4	VB5
Measure type	Cost	% of Total
Lighting (Building Retrofits)		
Cooling		
Lighting (Street/Traffic)		
Heating		
Water Heating		
Appliances		
Building Shell/Weatherization (insulation, air/duct sealing, windows/doors)		
Refrigeration		
Motors/Drives		
Other Efficiency Measures		

VB6: Can you please rank the level of support you received from the following groups in carrying out this project?

	High	Medium	Low	Not applicable
Local government officials				
Internal staff				
The community				
Local utility				
EECBG technical support				
External technical support				
My management				

PART II – On Line Survey Completion Section

IF ACTIVITY = RESIDENTIAL GOTO “RESIDENTIAL TRACK.”

IF ACTIVITY = NON-RESIDENTIAL GOTO “NON-RESIDENTIAL TRACK.”

TRACK 1 RESIDENTIAL ONLY

Res Subsection 1:	Building Characteristics (BC)
Res Module 1:	Lighting
Res Module 2:	Cooling Equipment
Res Module 3:	Heating Equipment
Res Module 4:	Geothermal Heat Pump
Res Module 5:	Water Heating
Res Module 6:	Appliances
Res Module 7:	Weatherization (Building Shells, Windows/Doors)
Res Module 8:	Other Technology

RES SUBSECTION 1: BUILDING CHARACTERISTICS (BC)

Now I'd like to ask you some questions about the homes or residential buildings treated by the project.

BC1a. How many homes or residential buildings were/are being treated under this project?

Residential – single family homes	_____
	[GO TO BC1c]
Residential – multi-family (2-4 units)	_____
	[GO TO BC1c]
Large multi-family buildings (5 or more units)	[GO TO BC1c]
Institutional residential facilities (dormitories, nursing homes)	[GO TO BC1c]
None	1
[Don't know]	97
[Refused]	98

BC1b. How many dwelling units of each size are in the multi-unit building(s) treated under this project?

Unit Size (bedrooms)	Number of dwelling units
Studio	
1 BR	
2 BR	
3 BR or more	
[Don't Know]	97
[Refused]	98

BC1c. Would you say that the total heated or cooled floor area is...?

Less than 1,500 sqft	1
Between 1,500 - 5,000 sqft	2
Between 5,000 - 10,000 sqft	3
Between 10,000 – 25,000 sqft	4
Between 25,000 – 50,000 sqft	5
Between 50,000 – 75,000 sqft	6
Between 75,000 – 100,000 sqft	7
Over 100,000 sqft	8
[Don't Know]	97
[Refused]	98

BC1d. How many square feet were treated through the project, in total? (IF [DON'T KNOW] ASK FOR BEST GUESS)

Square feet	
[Don't know]	97
[Refused]	98

BC1e. What percent of this square footage would you say is heated or cooled? (IF [DON'T KNOW] ASK FOR BEST GUESS)

(Enter Area)	
Enter Percent	
[Don't know]	97
[Refused]	98

BC2. Which of the primary fuel sources was used for heating the space treated under this project? [READ LIST]

Natural Gas	1
OilPropane/LPG	2
Fuel	3
Electricity	5
Wood and Biomass	6
OPEN/Other-RECORD	_____
[Don't know]	97
[Refused]	98

BC3. How would you describe the ownership and energy payment responsibility of the buildings? Indicate the percentage of the residential homes and buildings applicable to each tenant/owner scenario (sum to 100%). Electric/Gas payments refer to direct energy bills paid to utility/supplier.

Housing Type	Electric	Natural Gas
Owner-occupied, utility bill paid directly by owner (%)		
Rental tenant occupant, utility bill included in rent (paid by owner (%)		
Rental tenant occupant utility bill pad directly by tenant		
[Don't know]	97	97
[Refused]	98	98

BC4. [SKIP IF BC1a. = RESIDENTIAL SINGLE FAMILY HOMES] With respect to tracking of energy use, please indicate which of the following applies (note all that apply):

The building has an in-house energy manager responsible for all energy-related expenses (Full-time/Part-Time/None)	F P N
The building retains outside management to track and evaluate energy use and costs (Y/N)	Y N
Occupants are provided with regular monthly feedback on energy consumption use (bills or summaries) (Y/N)	Y N
Occupants are provided with detailed usage pattern information, including daily (or less) usage reports (Y/N)	Y N
Occupants are provided with feedback on the results of energy-savings measures that are installed as part of this program (Y/N)	Y N
If Yes, what kind of feedback is provided?	

ONLY RESPONDENTS WITH LIGHTING MEASURES ANSWER QUESTIONS IN THIS MODULE.

RES MODULE 1: LIGHTING

[IF &LIGHTING = TRUE]

In this section we'll be discussing the lighting project that received support from the EECBG program &PROJECT_TITLE.

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK LI1a THROUGH LI1c.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, ASK LI2a THROUGH LI2c.]

[REPEAT LI1a - LI1c. FOR EACH &LI_TECH IN THE TRACKING DATA.]

NOTE: CALCULATING SAVINGS FROM THIS SURVEY WILL REQUIRE NUMBER OF BULBS IN EACH LINEAR FLUORESCENT FIXTURE WHICH WILL ADD TOO MUCH LENGTH TO THE SURVEY IF OTHER MEASURE CATEGORIES ARE ALSO TO BE ADDRESSED. IF LIGHTING IS THE ONLY MEASURE, THEN WE WILL PROCEED. IF IT IS NOT, THEN A FOLLOW UP CALL WILL BE REQUIRED TO CAPTURE ALL OF THE NECESSARY DATA.

Check here if these measures were: [] Rebated [] Financed or [] Directly installed

LI1a. Our records indicate that your organization installed &LI_NUM of &LI_TECH through the &PROGRAM, is this correct?

Yes, installed that number	1	[GO TO LI1A FOR NEXT &LI_TECH]
Did not install any of that technology	2	[GO TO LI1A FOR NEXT &LI_TECH]
Technology correct, number wrong	3	[GO TO LI1B]
[Don't know]	97	[GO TO LI1A FOR NEXT &LI_TECH]
[Refused]	98	[GO TO LI1A FOR NEXT &LI_TECH]

LI1b. What is the correct number of &LI_TECH that you installed?

ENTER NUMBER		[GO TO LI1c]
[Don't know]	97	[GO TO LI1A FOR NEXT &LI_TECH]
[Refused]	98	[GO TO LI1A FOR NEXT &LI_TECH]

LI1c. Why did you install a different number of &LI_TECH?

Have no idea why numbers differ	1	[GO TO LI1A FOR NEXT &LI_TECH]
Put some in storage	2	[GO TO LI1A FOR NEXT &LI_TECH]
Installed some at another location	3	[GO TO LI1A FOR NEXT &LI_TECH]
Insufficient financial resources to complete full amount	4	[GO TO LI1A FOR NEXT &LI_TECH]
Other; specify_____	___	[GO TO LI1A FOR NEXT &LI_TECH]
[Don't know]	97	[GO TO LI1A FOR NEXT &LI_TECH]
[Refused]	98	[GO TO LI1A FOR NEXT &LI_TECH]

[ONCE ALL &LI_TECHS FROM TRACKING DATA EXHAUSTED, SKIP TO LI3.]

[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK LI2a THROUGH LI2c.]

Check here if these measures were: [] Rebated [] Financed or [] Directly installed

LI2a. Which of the following kinds of lighting fixtures, if any, did you install with the assistance of EECBG for PROJECT_TITLE? [IF [DON'T KNOW], ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO DOES.]

LI2b. Which kinds of the following kinds of lighting controls, if any, did you install with the assistance of EECBG for PROJECT_TITLE? [IF [DON'T KNOW], ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO DOES.]

LI2c. Approximately how many units of &LI_TECH did you install?

RESPONSE GRID FOR LI1 AND LI2

	&LI_TECH	LI1a Tracking Verified?	LI1b Corrected # Install	LI1c Reason for Diff	LI2a/b Untracked Tech Inst	LI2c Untracked # Install
	Lamps & Fixtures					
1	Compact fluorescent, screw-in modular					
2	Compact fluorescent, hardwire					
3	LED overhead fixtures					
4	LED bulbs					
77	Other fixtures (Specify_____)					
	Controls					
1	Timeclock controls					
2	Occupancy sensors					
3	Bypass/Delay Timers					
4	Photocell, light sensors					
5	Daylighting control strategies					
77	Other controls (Specify_____)					

[FOR EACH FIXTURE TYPE REPORTED IN LI1a AND LI2a, ASK LI3]

LI3. What types of fixtures, if any, were replaced when installing &LI_TECH? [ALLOW MULTIPLE RESPONSES]

Did not replace anything - new equipment	0
Compact fluorescent, screw-in modular	1
Compact fluorescent, hardwire	2
Incandescent	3
LED overhead fixtures	4
LED bulbs	5
Other (Specify_____)	_____
[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 new fixtures through the project?

Yes	1	[GO TO LI3 FOR NEXT FIXTURE TYPE]
No	2	[GO TO LI3b]
[Don't know]	97	[GO TO LI3 FOR NEXT FIXTURE TYPE]
[Refused]	98	[GO TO LI3 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 LI3 FOR NEXT FIXTURE TYPE]
[Refused]	98	[GO TO LI3 FOR NEXT FIXTURE TYPE]

LI3c. How many fewer/more fixtures did you remove?

ENTER NUMBER	_____	[GO TO LI3 FOR NEXT FIXTURE TYPE]
[Don't know]	97	[GO TO LI3 FOR NEXT FIXTURE TYPE]
[Refused]	98	[GO TO LI3 FOR NEXT FIXTURE TYPE]

RESPONSE GRID FOR LI3

	&LI_TECH	LI3 Equipment replaced	LI3a Replaced same #	LI3b Replaced fewer/more	LI3c # Different
0	No fixtures removed: new construction or addition				
1	Compact fluorescent, screw-in modular				
2	Compact fluorescent, hardwire				
3	Incandescent bulbs				
4	LED overhead fixtures				
5	LED bulbs				
77	Other fixture, Specify _____				

[FOR EACH FIXTURE TYPE REPORTED IN LI1 AND LI2a, ASK LI4a]

LI4a - LI4l. How many fixtures of the &LI_TECH serve each of the following spaces?

LI4a	Living/family room
LI4b	Dining room
LI4c	Den/office
LI4d	Kitchen
LI4e	Bedrooms
LI4f	Bathrooms
LI4g	Closets
LI4h	Hallways
LI4i	Attic
LI4j	Basement
LI4k	Garage
L14l	Other (specify)

[IF MULTIFAMILY BUILDING THEN ASK L14m-o; IF SINGLE FAMILY THEN SKIP TO L15a]

L14lm- L14o. How many fixtures of the &LI_TECH serve each of the following spaces?

L14 m	Common Area Hallways
L14n	Common Area Laundry
L14o	Common Area Meeting Rooms

RESPONSE GRID FOR LI4

	&LI_TE CH	LI4a Living/FR Fixtures	LI4b Dining Room Fixtures	LI4c Den/O ffice Fixtures	LI4d Kitchen Fixtures	LI4e Bedrooms Fixtures	LI4f Bathrooms Fixtures	LI4g Closets Fixtures	LI4h Hallways Fixtures	LI4i Attic Fixtures	LI4j Basement Fixtures	LI4k Garage Fixtures	LI4l Common Areas - Hallways Fixtures	LI4m Common Areas - Laundry Fixtures	LI4n Common Areas - Meeting Rooms Fixtures	LI4 Other Fixtures
1	Compact Fluorescent, Screw-in Modular															
2	Compact Fluorescent, Hardwire															
3	LED Overhead Fixtures															
4	LED Bulbs															
5	Other fixture (Specify)															

[FOR EACH CONTROL TYPE REPORTED IN LI1 AND LI2b, ASK LI5A]

LI5a. What is the total wattage controlled by &LI_TECH?

LI5b-m. After installation, what is the percentage of wattage controlled by &LI_TECH in each room?

LI5b	Living/family room	
LI5c	Dining room	
LI5d	Den/office	
LI5e	Kitchen	
LI5f	Bedrooms	
LI5g	Bathrooms	
LI5h	Closets	
LI5i	Hallways	
LI5j	Attic	
LI5k	Basement	
LI5l	Garage	
LI5m	Other (specify)	

[IF MULTIFAMILY BUILDING THEN ASK L15n-p; IF SINGLE FAMILY THEN SKIP TO L15a]

LI5n-p. After installation, what is the percentage of wattage controlled by &LI_TECH in each room?

L14n	Common Area Hallways	
L14o	Common Area Laundry	
L14p	Common Area Meeting Rooms	

RESPONSE GRID FOR LI5a

	Controls	LI5a & total wattage controlled
12	Timeclock controls	
13	Occupancy sensors	
14	Bypass/delay timers	
15	Photocell, light sensors	
16	Daylighting control strategies	
78	Other Controls	

ONLY RESPONDENTS WITH COOLING MEASURES ANSWER QUESTIONS IN THIS MODULE.

RES MODULE 2: COOLING EQUIPMENT

[IF &COOLING = TRUE]

Now we would like to discuss the cooling project that received funding from the EECBG program through &PROJECT_TITLE.

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK CL1 THROUGH CL6a.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, SKIP TO CL-N1.]

[REPEAT CL1 THROUGH CL6a FOR EACH &C_TECH IN THE TRACKING DATA.]

Check here if these measures were: Rebated Financed or Directly installed

CL1. Our records indicate that your organization installed &CTECH_NUM &C_TECH through the EECBG program &PROGRAM. Is that correct?

Yes, installed that number	1	[GO TO CL3]
Did not install any of that technology	2	[GO TO CL1 FOR NEXT &C_TECH]
Technology correct, number wrong	3	[GO TO CL2a]
[Don't know]	97	[GO TO CL1 FOR NEXT &C_TECH]
[Refused]	98	[GO TO CL1 FOR NEXT &C_TECH]

CL2a. How many &C_TECH did you install?

RECORD NUMBER	_____	[GO TO CL2b]
[Don't know]	97	[GO TO CL2b]
[Refused]	98	[GO TO CL2b]

CL2b. Why did you install a different number of &C_TECH?

Have no idea why numbers differ	1	[GO TO CL3]
Put some in storage	2	[GO TO CL3]
Installed some at another location	3	[GO TO CL3]
Insufficient financial resources to complete full amount	4	[GO TO CL3]
Other, Specify _____	_____	[GO TO CL3]
[Don't know]	97	[GO TO CL3]
[Refused]	98	[GO TO CL3]

CL3. Our records indicate that the &CTECH_NUM &C_TECH had a total capacity of &CTECH_CAP &CTECH_CAP_UNITS. Is that correct?

Yes	1	[GO TO CL5]
No	2	[GO TO CL4a]
[Don't know]	97	[GO TO CL5]
[Refused]	98	[GO TO CL5]

CL4a. What is the correct total capacity? What units?

RECORD CAPACITY NUMBER	_____	[GO TO CL4b]
RECORD CAPACITY UNITS (TONS, BTU/HOUR, THERM, ETC)	_____	[GO TO CL4b]
[Don't know]	97	[GO TO CL4b]
[Refused]	98	[GO TO CL4b]

CL4b. Why was the capacity of &C_TECH different?

Have no idea why numbers differ	1	[GO TO CL5]
Installed some at another location	3	[GO TO CL5]
Insufficient financial resources to complete full amount	4	[GO TO CL5]
Other, Specify _____	___	[GO TO CL5]
[Don't know]	97	[GO TO CL5]
[Refused]	98	[GO TO CL5]

CL5. Our records indicate the &CTECH have an efficiency rating of &CTECH_EFF &CTECH_EFF_UNITS. Is that correct?

Yes	1	[GO TO NEXT CL1]
No	2	[GO TO CL6a]
[Don't know]	97	[GO TO NEXT CL1]
[Refused]	98	[GO TO NEXT CL1]

CL6a. What is the correct efficiency rating? What units?

RECORD EFFICIENCY NUMBER		[GO TO CL7a]
RECORD EFFICIENCY UNIT (EER, SEER, KW/TON, or specify other)		[GO TO CL7a]
[Don't know]	97	[GO TO CL7a]
[Refused]	98	[GO TO CL7a]

RESPONSE GRID FOR CL1 TO CL6a

	Equipment Type	CL1	CL2a	CL2b	CL3	CL4a	CL4b	CL5	CL6a
1	Central A/C Units								
2	Individual Heat Pump Units								
3	Window/Wall Units								
77	Other (Specify)								
97	[Don't know]								
98	[Refused]								

[AFTER ALL MEASURES IN TRACKING DATA EXHAUSTED, SKIP TO CL7a]

USE THE CL-N1 TO CL-N4 SEQUENCE IF THE PROGRAM TRACKING DATABASE DOES NOT CONTAIN MEASURE-LEVEL DATA.

CL-N1. What types of cooling equipment did you install with the assistance of EECBG for &PROGRAM? [MARK ALL THAT APPLY IN LIST IN THE RESPONSE GRID; REPEAT SEQUENCE FOR EACH TYPE OF EQUIPMENT]

Central A/C units	1	[GO TO CL-N2]
Individual Heat pump units	2	[GO TO CL-N2]
Window/Wall units	3	[GO TO CL-N2]
[Other (Specify_____	___	[GO TO CL-N2]
[Don't know]	97	[ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO KNOWS, THEN NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

CL-N2. How many units of &C_TECH did you install?

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

RESPONSE GRID FOR CL-N1 TO CL-N2

	EQUIPMENT	CL-N1	CL-N2 Number
1	Central A/C units		
2	Individual Heat Pump Units		
3	Window/Wall Units		
77	Other (Specify)		

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

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

CL-N4. What was the efficiency rating of the &CTECH_EFF units that you installed? What units? [\[RECORD FOR EACH UNIT INSTALLED THROUGH &PROGRAM.\]](#)

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 CL-N1 TO CL-N4

	Technology	CL-N3 Capacity Number	CL-N3 Capacity Units	CL-N4 Efficiency Number	CL-N4 Efficiency Units
1	Specify:				
2	Specify:				
4	Specify:				
5	Specify:				
6	Specify:				
7	Specify:				
8	Specify:				

[\[ASK CL7a AND CL7b FOR EACH MEASURE IDENTIFIED IN CL1 AND CL-N1\]](#)

CL7a. What months per year do you operate your air conditioning system?

_____ (examples: July and August OR March through September)

CL7b. During those months, how often do you operate your air conditioner?

All the time	1	[GO TO CL7d]
Frequently but < 24/7	2	[GO TO CL7c]
Only on hot days	3	[GO TO CL7c]
No pattern, it varies	4	[GO TO CL7c]
Never	5	[GO TO CL7d]
[Don't know]	97	[GO TO CL7d]
[Refused]	98	[GO TO CL7d]

CL7c. During those months, what is the average no. of hours per day that the AC unit is turned on and used?
_____ hours per day.

CL7d. Have there been any major changes in cooling load corresponding to the new equipment installation, such as... [READ LIST]

Addition on building	1
Change in heat-producing equipment	2
Large change in # of occupants	3
Other; Specify _____	_____
[Don't know]	97
[Refused]	98

ASK CL8a THROUGH CL8f FOR EACH MEASURE IDENTIFIED IN CL1 AND 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 through the program.

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

No A/C Removed	0
Central A/C units	1
Individual Heat pump units	2
Window/Wall units	3
Other; Specify _____	___
[Don't know]	97
[Refused]	98

CL8b. How many units were removed?

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

CL8c. What was the total capacity of the units that were removed? What units?

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 unit(s) that was/were removed and replaced? Was it (Were they)...

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 unit(s)? What units?

RECORD EFFICIENCY NUMBER		[GO TO CL8f]
RECORD EFFICIENCY UNIT (EER, SEER, KW/TON)		[GO TO CL8f]
[Don't know]	97	[GO TO NEXT CL8a]
[Refused]	98	[GO TO CL8a]

CL8f. On average, how old was the equipment that was removed and replaced? Would you say...

Less than 5 years old	1	[GO TO NEXT CL8a]
Between 5 and 10 years old	2	[GO TO NEXT CL8a]
10 to 20 years old	3	[GO TO NEXT CL8a]
More than 20 years old	4	[GO TO NEXT CL8a]
[Don't know]	97	[GO TO NEXT CL8a]
[Refused]	98	[GO TO NEXT CL8a]

RESPONSE GRID FOR CL8

		CL8a	CL8b	CL8c	CL8d	CL8e Number	CL8e Units	CL8f
0	No A/C Removed		skip	skip	skip	skip	skip	skip
1	Central A/C units							
2	Individual Heat Pump Units							
3	Window/Wall Units							
77	Other (Specify)							

CL9a. Did you install any heating or cooling controls as part of the project supported by the EECBG program?

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? Were these: [\[SELECT ALL THAT APPLY\]](#)

HVAC Controls: Manual Thermostat	1	[GO TO CL9c]
HVAC Controls: Bypass Timer	2	[GO TO CL9c]
HVAC Controls: Time Clock	3	[GO TO CL9c]
HVAC Controls: Set-Back Programmable Thermostat	4	[GO TO CL9c]
HVAC Controls: Communicating Programmable Thermostat	5	[GO TO CL9c]
Other (Specify) _____	___	[GO TO CL9c]
[Don't know]	97	[GO TO CL9c]
[Refused]	98	[GO TO CL9c]

[\[FOR EACH CONTROL TECHNOLOGY MENTIONED IN CL9b, ASK CL9c THROUGH CL9f\]](#)

CL9c. What percentage of the total cooling capacity at your location do those new controls serve?

ENTER PERCENT	_____	[GO TO CL9d]
[Don't know]	97	[GO TO CL9d]
[Refused]	98	[GO TO CL9d]

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

No controls replaced/new construction or addition	0	[GO TO CL9c for NEXT CONTROL TYPE FROM CL9b]
HVAC Controls: Manual Thermostat	1	[GO TO CL9e]
HVAC Controls: Bypass Timer	2	[GO TO CL9e]
HVAC Controls: Time Clock	3	[GO TO CL9e]
HVAC Controls: Set-Back Programmable Thermostat	4	[GO TO CL9e]
HVAC Controls: Communicating Programmable Thermostat	5	[GO TO CL9e]
Other (Specify) _____	___	[GO TO CL9e]
[Don't know]	97	[GO TO CL9e]
[Refused]	98	[GO TO CL9e]

RESPONSE GRID FOR CL9

	NEW INSTALLED EQUIPMENT TYPE	CL9a	CL9b	CL9c	CL9d
1	HVAC Controls: Manual Thermostat				
2	HVAC Controls: Bypass Timer				
3	HVAC Controls: Time Clock				
4	HVAC Controls: Set-Back Programmable Thermostat				
5	HVAC Controls: Communicating Programmable Thermostat				
77	Other (Specify)				
98	[Don't know]				
99	[Refused]				

ONLY RESPONDENTS WITH HEATING MEASURES ANSWER QUESTIONS IN THIS MODULE.

RES MODULE 3: HEATING EQUIPMENT

[IF &HEATING = TRUE]

Now we would like to discuss the heating project that received funding from EECBG program for &PROJECT_TITLE.

Check here if these measures were: Rebated Financed or Directly installed

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE, ASK HT1 THROUGH HT6a.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, SKIP TO HT-N1]

[REPEAT HT1 THROUGH HT6a FOR EACH &H_TECH IN THE TRACKING DATA.]

Check here if these measures were: Rebated Financed or Directly installed

HT1. Our records indicate that you installed &HTECH_NUM &H_TECH through the EECBG program &PROGRAM. Is that correct?

Yes, installed that number	1	[GO TO HT3]
Did not install any of that technology	2	[GO TO HT1 FOR NEXT &H_TECH]
Technology correct, number wrong	3	[GO TO HT2a]
[Don't know]	97	[GO TO HT1 FOR NEXT &H_TECH]
[Refused]	98	[GO TO HT1 FOR NEXT &H_TECH]

HT2a. How many &H_TECH did you install?

RECORD NUMBER	_____	[GO TO HT2B]
[Don't know]	97	[GO TO HT3]
[Refused]	98	[GO TO HT3]

HT2b. Why did you install a different number of &H_TECH?

Have no idea why numbers differ	1
Put some in storage	2
Installed some at another facility	3
Insufficient financial resources to complete full amount	4
Other, Specify	_____
[Don't know]	97
[Refused]	98

HT3. Our records indicate that the &HTECH_NUM &H_TECH had a total capacity of &HTECH_CAP &HTECH_CAP_UNITS. Is that correct?

Yes	1	[GO TO HT5]
No	2	[GO TO HT4a]
[Don't know]	97	[GO TO HT5]
[Refused]	98	[GO TO HT5]

HT4a. What is the correct total capacity? What are the correct units?

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

HT4b. Why was the capacity of &H_TECH different?

Have no idea why numbers differ	1
Installed some at another facility	2
Insufficient financial resources to complete full amount	3
Other, Specify	_____
[Don't know]	97
[Refused]	98

HT5. Our records indicate the &HTECH have an efficiency rating of &HTECH_EFF &HTECH_EFF_UNITS. Is that correct?

Yes	1	[GO TO NEXT HT1]
No	2	[GO TO HT6a]
[Don't know]	97	[GO TO NEXT HT1]
[Refused]	98	[GO TO NEXT HT1]

HT6a. What is the correct efficiency rating?

RECORD EFFICIENCY NUMBER		[GO TO HT1 FOR NEXT &H_TECH]
RECORD EFFICIENCY UNIT (AFUE, thermal efficiency, or specify other)		[GO TO HT1 FOR NEXT &H_TECH]
[Don't know]	97	[GO TO HT1 FOR NEXT &H_TECH]
[Refused]	98	[GO TO HT1 FOR NEXT &H_TECH]

RESPONSE GRID FOR HT1 TO HT6a

	EQUIPMENT TYPE	HT1	HT2a	HT2b	HT3	HT4a	HT4b	HT5	HT6a
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	Radiant Heaters								
7	Other (Specify)								
7									
9	[Don't know]								
7									
9	[Refused]								
8									

USE THE HT-N1 TO HT-N4 SEQUENCE IF THE PROGRAM TRACKING DATABASE DOES NOT CONTAIN MEASURE-LEVEL DATA.

HT-N1. What types of heating equipment did you install with the assistance of EECBG for &PROJECT TITLE?
[ALLOW MULTIPLE ANSWERS]

Central Boilers	1	[GO TO HT-N2]
Packaged Heating Units	2	[GO TO HT-N2]
Individual Space Heater / Portable Room Heater / Strip Heating	3	[GO TO HT-N2]
Split-system Heat Pumps	4	[GO TO HT-N2]
Central Furnaces	5	[GO TO HT-N2]
Radiant Heaters	7	[GO TO HT-N2]
Other (Specify) _____	___	[GO TO HT-N2]
[Don't know]	97	ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO DOES KNOW. [THEN GO TO NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

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

HT-N4. What was the efficiency rating and capacity of the &HTECH_EFF units that you installed? [RECORD FOR ALL UNITS INSTALLED THROUGH &PROGRAM.]

RECORD EFFICIENCY NUMBER		[GO TO NEXT HT-N1]
RECORD EFFICIENCY UNIT (AFUE, Thermal efficiency, specify other)		[GO TO NEXT HT-N1]
[Don't know]	97	[GO TO NEXT HT-N1]
[Refused]	98	[GO TO NEXT HT-N1]

RESPONSE GRID FOR HT-N1 TO HT-N4

	EQUIPMENT TYPE	HT-N1	HT-N2	HT-N3 Number	HT-N3 Units	HT-N4 Efficiency Number	HT-N4 Eff Units	HT-N4 Capacity
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	Radiant Heaters							
77	Other (Specify)							

[ASK HT8a THROUGH HT8f FOR EACH MEASURE IDENTIFIED IN HT1 AND HT-N1]

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

SELECT EQUIPMENT TYPE		[GO TO RECORD AS &H_TECH_REM]
NO EQUIPMENT REMOVED	1	[GO TO HT9a FOR NEXT &H_TECH]
[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. 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 the unit(s) 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 and capacity of the units you removed?

RECORD EFFICIENCY NUMBER		[GO TO NEXT HT8a]
RECORD EFFICIENCY UNIT (AFUE, Thermal efficiency, specify other)		[GO TO NEXT HT8a]
CAPACITY (TONS, BTU/HOUR, THERM, ETC)		[GO TO NEXT HT8a]
[Don't know]	97	[GO TO HT8f]
[Refused]	98	[GO TO HT8f]

HT8f. On average, how old was the unit that was removed and replaced? Would you say [ASK FOR EACH UNIT REMOVED]....

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]
Refused	98	[GO TO NEXT HT8a]

RESPONSE GRID FOR HT8

	EQUIPMENT TYPE	HT8a	HT8b	HT8c	HT8d	HT8e Efficiency Number	HT8e Efficiency Units	HT8e Capacity	HT8f
1	Central Boilers								
2	Packaged Heating Units								
3	Individual Space Heater / Portable Room Heater / Strip Heating								
4	Split-system Heat Pumps								
5	Central Furnaces								
7	Radiant Heaters								
77	Other (Specify)								

HT9a. Did you install any heating controls as part of &PROJECT_TITLE?

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]**

HVAC Controls: Manual Thermostat	1
HVAC Controls: Bypass Timer	2
HVAC Controls: Time Clock	3
HVAC Controls: Set-Back Programmable Thermostat	4
Other (Specify)	—
[Don't know]	97
[Refused]	98

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

HT9c. What percentage of the total heating capacity in your household or residential building 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]
HVAC Controls: Manual Thermostat	2	[GO TO HT9e]
HVAC Controls: Bypass Timer	3	[GO TO HT9e]
HVAC Controls: Time Clock	4	[GO TO HT9e]
HVAC Controls: Set-Back Programmable Thermostat	5	[GO TO HT9e]
Other (Specify)	—	[GO TO HT9e]
[Don't know]	97	[GO TO HT9e]
[Refused]	98	[GO TO HT9e]

RESPONSE GRID FOR HT9

	CONTROLS	HT9c	HT9d
1	Energy Management System		
2	HVAC Controls: Manual Thermostat		
3	HVAC Controls: Bypass Timer		
4	HVAC Controls: Time Clock		
5	HVAC Controls: Set-Back Programmable Thermostat		
6	CO2 Sensors/Demand Control Ventilation		
—	Other (Specify)		
97	[Don't know]		
98	[Refused]		

ONLY RESPONDENTS WITH GEOTHERMAL HEAT PUMP MEASURES ANSWER QUESTIONS IN THIS MODULE.

RES MODULE 4: GEOTHERMAL HEAT PUMP

[IF &&GEOTHERMAL HEAT PUMP = TRUE]

In this section we'll be discussing the geothermal heat pump project that received support from &SPONSOR &PROGRAM.

I am going to discuss some technical information about the system in order to confirm our information regarding your geothermal system. The paperwork from the original site survey, design study, or installation may help you answer these questions.

[If they do not have this information handy, attempt the questions anyway, and ask them to give their best estimate. If they don't know or refuse to answer a confirmation question, mark "97" or "98" in parentheses and we will assume the paperwork is correct].

UNITS

[IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, GO TO GTU1a]

Check here if these measures were: Rebated Financed or Directly installed

GTU1. Our records indicate that you installed a >_TECH geothermal heat pump through the &PROGRAM. Is this correct?

Yes	1	[GO TO GTU2]
No	2	[GO TO GTU1a]
[Don't Know]	97	[GO TO GTU1a]
[Refused]	98	[GO TO GTU1a]

GTU1a. What is the manufacturer and model number of your geothermal heat pump?

RECOR MANUFACTURER_____		[GO TO GTU2]
RECORD MODEL_____		[GO TO GTU2]
[Don't Know]	97	[GO TO GTU2]
[Refused]	98	[GO TO GTU2]

GTU2. Is this heat pump still installed?

Yes		[GO TO GTU3]
No		[GO TO GTU2a]
[Don't Know]	97	[GO TO GTU3]
[Refused]	98	[GO TO GTU3]

GTU2a. Why did you remove this heat pump?

SPECIFY_____		[GO TO GTU3]
[Don't Know]	97	[GO TO GTU3]
[Refused]	98	[GO TO GTU3]

GTU3. Does your geothermal system provide heating and cooling, domestic water heating, both, or something else? **[CIRCLE ALL THAT APPLY]**

Heating and Cooling	1	
Domestic water heating	2	
Other, specify _____	___	
[Don't Know]	97	
[Refused]	98	

ACCESSORIES

GTA1. What is the horsepower of the pump used to circulate water through the underground tubing?

RECORD HORSEPOWER		
[Don't Know]	97	
[Refused]	98	

GTA1a. How is the motor controlled?

[RECORD RESPONSE] _____ **[IF NOT MENTIONED, PROMPT "Can the pumps run at variable speeds? [on/off, variable speed, constant speed, something else] _____"**

[Don't Know]	97	
[Refused]	98	

GTA1b. What is the flow rate of water in the tubing?

[RECORD FLOW RATE (gallons per minute)] _____

[Don't Know]	97	
[Refused]	98	

GTA2. Does your geothermal system require an additional pump or pumps to circulate water throughout the building?

Yes	1	
No	2	[GO TO GTA3]
[Don't Know]	97	[GO TO GTA3]
[Refused]	98	[GO TO GTA3]

GTA2a. What is the total horsepower of these pumps?

RECORD HORSEPOWER		
[Don't Know]	97	
[Refused]	98	

GTA2b. How is it controlled?

RECORD RESPONSE		
[Don't Know]	97	
[Refused]	98	

[IF GTU3 does not equal "Heating and Cooling" or "Other" THEN GO TO GTN1]

GTA3. Does your geothermal system require mechanical air circulation to operate?

Yes	1	
No	2	[GO TO GTN1]
[Don't Know]	97	[GO TO GTN1]
[Refused]	98	[GO TO GTN1]

GTA3a. What is the horsepower of the air circulation fan?

RECORD HORSEPOWER		
[Don't Know]	97	
[Refused]	98	

GTA3b. Does this fan run all the time, only when heat or cooling is needed, or using some other control scheme?

RECORD RESPONSE		
[Don't Know]	97	
[Refused]	98	

GTA3c. Is this fan a variable speed ECM fan?

RECORD RESPONSE		
[Don't Know]	97	
[Refused]	98	

INSTALLATION

GTN1. When was your geothermal system installed?

RECORD RESPONSE (Month and Year (if possible get day)) _____

[Don't Know]	97	
[Refused]	98	

GTN2. Have you modified the system since it was first installed?

Yes	1	
No	2	[GO TO GTP1]
[Don't Know]	97	[GO TO GTP1]
[Refused]	98	[GO TO GTP1]

GTN2a. Was the modification an addition or an equipment replacement?

Addition	1	
Replacement	2	[GO TO GTN2c]
Both	3	GO TO GTN2c]
[Don't Know]	97	[GO TO GTP1]
[Refused]	98	[GO TO GTP1]

GTN2b. What have you added?

RECORD RESPONSE (note changes to capacity)		
[Don't Know]	97	
[Refused]	98	

[IF GTN2a=1, GO TO GTN2d.]

GTN2c. What components of your system have required repair or replacement?

RECORD RESPONSE - note changes to capacity		
[Don't Know]	97	
[Refused]	98	

GTN2d. When did you make these changes?

RECORD Month and Year (if possible get day)		
[Don't Know]	97	
[Refused]	98	

PRODUCTION

GTP1. Did your system begin running on the date it was installed?

Yes	1	[GO TO GTP2]
No	2	
[Don't Know]	97	[GO TO GTP2]
[Refused]	98	[GO TO GTP2]

GTP1a When did it begin running?

RECORD RESPONSE (Month, Year, and Day if Possible)		
[Don't Know]	97	
[Refused]	98	

GTP2. Has there been any major down-time (more than a few days) since the system was installed?

Yes	1	
No	2	[GO TO GTP3]
[Don't Know]	97	[GO TO GTP3]
[Refused]	98	[GO TO GTP3]

GTP2a. How long was the most substantial downtime period, and when did it occur?

RECORD RESPONSE HOW LONG (Months, Years, and Days if Possible)		
RECORD RESPONSE WHEN (Month, Year, and Day if Possible)		
[Don't Know]	97	
[Refused]	98	

GTP2b. Why was the system down?

RECORD RESPONSE		
[Don't Know]	97	
[Refused]	98	

[IF GTU3= "Domestic Water Heating" THEN GO TO GTP7]

HEATING

GTP3. What percentage of your space heating usage is provided by the geothermal system?

RECORD PERCENTAGE		IF 100%, GO TO GTP5
[Don't Know]	97	
[Refused]	98	

GTP4. What type of back-up fuel do you use for your geothermal heating system?

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO GTP4c]
Propane	4	[GO TO GTP4c]
Wood	5	[GO TO GTP4c]
Nothing	6	[GO TO GTP4d]
Other, Specify_____	___	[GO TO GTP4c]
Don't Know	97	[GO TO GTP4c]
Refused	98	[GO TO GTP4c]

GTP4a. What type of heating system is this?

Furnace	1	
Boiler	2	
Space Heaters	3	
Room Units	4	
Other, Specify _____]	___	
Refused	97	
Don't know	98	

GTP4c. How old is this heating system?

RECORD RESPONSE		
[Don't Know]	97	
[Refused]	98	

GTP4c. Was this heating system in place before the geothermal system was installed?

Yes	1	[GO TO GTP5]
No	2	
[Don't Know]	97	[GO TO GTP5]
[Refused]	98	[GO TO GTP5]

GTP4d. What type of heating system was used prior to the geothermal heating system?

Furnace	1	
Boiler	2	
Space Heaters	3	
Room Units	4	
None	5	[GO TO GTP5]
Other, Specify _____]	___	
[Don't Know]	97	
[Refused]	98	

GTP4e. What type of fuel was used by the system that your geothermal system replaced?

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO GTP5]
Propane	4	[GO TO GTP5]
Wood	5	[GO TO GTP5]
Other, Specify _____]	___	[GO TO GTP5]
[Don't Know]	97	[GO TO GTP5]
[Refused]	98	[GO TO GTP5]

GTP4f. How old was this heating system?

RECORD RESPONSE		
[Don't Know]	97	
[Refused]	98	

COOLING

GTP5. What percentage of your space cooling usage is provided by the geothermal system?

[RECORD PERCENTAGE] _____ [IF 100%, GO TO GTP7]

[Don't Know]	97	
[Refused]	98	

GTP6. What type of cooling system was used prior to the geothermal cooling system?

Central Air	1	
Window Units	2	
None	3	[GO TO GTP8]
Other, Specify _____	___	
[Don't Know]	97	
[Refused]	98	

GTP6a. How old was this cooling system?

RECORD RESPONSE		
[Don't Know]	97	
[Refused]	98	

WATER HEATING

[IF GTU3 = "Domestic Water Heating" THEN GO TO GTP10]

GTP7. What percentage of your water heating usage is provided by the geothermal system?

[RECORD PERCENTAGE] _____ [IF 100%, GO TO GTP8c]

GTP8. What type of back-up fuel do you use for your geothermal water heating system?

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO GTP8c]
Propane	4	[GO TO GTP8c]
Nothing	9	[GO TO GTP8d]
Other, Specify _____	___	[GO TO GTP8c]
[Don't Know]	97	[GO TO GTP8c]
[Refused]	98	[GO TO GTP8c]

GTP8a. What type of water heating system is this?

Tank Style	1	
Tankless	2	
Boiler	3	
Other, Specify_____	___	
[Don't Know]	97	
[Refused]	98	

GTP8b. Was this water heating system in place before the geothermal system was installed?

Yes	1	[GO TO GTP9]
No	2	
[Don't Know]	97	[GO TO GTP9]
[Refused]	98	[GO TO GTP9]

GTP8c. What type of water heating system was used prior to the geothermal water heating system?

Tank Style	1	
Tankless	2	
Boiler	3	
None	4	[GO TO GTP9]
Other, Specify_____	___	
[Don't Know]	97	
[Refused]	98	

GTP8d. What type of fuel was used by the water heating system that your geothermal system replaced?

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO GTP9]
Propane	4	[GO TO GTP9]
Other, Specify_____	___	[GO TO GTP9]
[Don't Know]	97	[GO TO GTP9]
[Refused]	98	[GO TO GTP9]

GTP9. On a scale of 1-10, where 1 is greatly falling short of your expectations and 10 represents greatly exceeding your expectations, is the geothermal system achieving the cost and energy savings you expected?

GTP9a. Why or why not?

ONLY RESPONDENTS WITH WATER HEATING MEASURES ANSWER QUESTIONS IN THIS MODULE.

RES MODULE 5: WATER HEATING

[IF &WATER HEATING = TRUE]

HW1a. Our records indicate that your organization installed &HW_NUM of &HW_TECH through the &PROGRAM, is this correct?

Yes, installed that number	1	[GO TO HW1a FOR NEXT &HW_TECH]
Did not install any of that technology	2	[GO TO HW1a FOR NEXT &HW_TECH]
Technology correct, number wrong	3	[GO TO HW1b]
[Don't Know]	97	[GO TO HW1a FOR NEXT &HW_TECH]
[Refused]	98	[GO TO HW1a FOR NEXT &HW_TECH]

HW1b. What is the correct number of &HW_TECH that you installed?

ENTER NUMBER	_____	[GO TO HW1c]
[Don't know]	97	[GO TO HW1c]
[Refused]	98	[GO TO HW1c]

HW1c. Why did you install a different number of &HW_TECH? [ACCEPT MULTIPLE ANSWERS]

Have no idea why numbers differ	1	[GO TO HW1a FOR NEXT &HW_TECH]
Put some in storage	2	[GO TO HW1a FOR NEXT &HW_TECH]
Installed at another residential building	3	[GO TO HW1a FOR NEXT &HW_TECH]
Funding insufficient to complete full amount	4	[GO TO HW1a FOR NEXT &HW_TECH]
Other, Specify	_____	[GO TO HW1a FOR NEXT &HW_TECH]
[Don't know]	97	[GO TO HW1a FOR NEXT &HW_TECH]
[Refused]	98	[GO TO HW1a FOR NEXT &HW_TECH]

[ONCE CORRECTIONS RECORDED THEN ASK HW2d FOR EACH CORRECTED TECHNOLOGY; ELSE GO TO HW3]

[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK HW2a THRU HW2c.]

Check here if these measures were: Rebated Financed or Directly installed

HW2a. Did you install any Hot Water Heating equipment through the EECBG program?

Yes	1	[GO TO HW2b]
-----	---	--------------

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

HW2b. Which kinds of Hot Water Heating equipment did you install?

SPECIFY	_____	[GO TO HW2c]
[Don't know]	97	[GO TO HW2c]
[Refused]	98	[GO TO HW2c]

HW2c. Approximately how many &HW_TECH were installed? [\[FOR EACH MEASURE TYPE MENTIONED.\]](#)

ENTER NUMBER	_____	[GO TO HW2d]
[Don't know]	97	[GO TO HW2d]
[Refused]	98	[GO TO HW2d]

HW2d. What is the total capacity of all of the units installed?

RECORD CAPACITY NUMBER (GALLONS)	_____	[GO TO HW2e]
[Don't know]	97	[GO TO HW2e]
[Refused]	98	[GO TO HW2e]

HW2e. How many of the &HW_TECH installed were used to replace existing &HW_TECH units?

ENTER NUMBER	_____
[Don't know]	97
[Refused]	98

RESPONSE GRID FOR HW1 AND HW2

	HW_TECH	HW1a Tracking Verified?	HW1b Corrected # Install	HW1c Reason for Diff	HW2a/b Untracked Tech Inst	HW2c Untracked # Install	HW2d Capacity	HW2e # replacing existing equipment
1	Specify:							
2	Specify:							
3	Specify:							
4	Specify:							
5	Specify:							
6	Specify:							

[FOR EACH MEASURE TYPE REPORTED IN HW1 AND HW2 where HW2e > 0, ASK HW3]

HW3. What types of equipment were replaced when installing &HW_TECH?

None/New equipment	1	[GO TO HW3 FOR NEXT &HW_TECH]
SPECIFY	_____	[GO TO HW3a]
[Don't know]	97	[GO TO HW3 FOR NEXT &HW_TECH]
[Refused]	98	[GO TO HW3 FOR NEXT &HW_TECH]

[FOR EACH EQUIPMENT TYPE REPLACED, ASK HW3a]

HW3a. Did you remove the same total capacity of &HW_TECH as you installed through the project?

Yes	1	[GO TO HW3d]
No	2	[GO TO HW3b]
[Don't know]	97	[GO TO HW3d]
[Refused]	98	[GO TO HW3d]

HW3b. Did you remove more or less &HW_TECH total capacity than you installed through the project?

More	1	[GO TO HW3c]
Fewer	2	[GO TO HW3c]
[Don't know]	97	[GO TO HW3d]
[Refused]	98	[GO TO HW3d]

HW3c. How much more/less &HW_TECHtotal capacity did you install?

[ENTER NUMBER]	_____	[GO TO HW3d]
[Don't know]	97	[HW3d]
[Refused]	98	[HW3d]

HW3d. What was the condition of the removed equipment?

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

HW3e. How old was the removed equipment?

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

RESPONSE GRID HW3

	HW3	HW3a Remove same amount	HW3b Remove more or less	HW3c Install more or more	HW3d Condition removed equip	HW3e Age removed equip
1	Specify:					
2	Specify:					
3	Specify:					
4	Specify:					
5	Specify:					
6	Specify:					

ONLY RESPONDENTS WITH APPLIANCE MEASURES ANSWER QUESTIONS IN THIS MODULE.

RES MODULE 6: APPLIANCES

[IF &APPLIANCE= TRUE]

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK AP1a THROUGH AP1c.

IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, ASK AP2a THROUGH AP2c. REPEAT AP1a THROUGH AP1f. FOR EACH &AP_TECH IN THE TRACKING DATA.]

Check here if these measures were: Rebated Financed or Directly installed

AP1a. Our records indicate that your organization installed &AP_NUM of &AP_TECH through the &PROGRAM, is this correct?

Yes, installed that number	1	[GO TO NEXT &AP_TECH]
Did not install any of that technology	2	[GO TO NEXT &AP_TECH]
Technology correct, number wrong	3	[GO TO AP1b]
[Don't know]	97	[GO TO NEXT &AP_TECH]
[Refused]	98	[GO TO NEXT &AP_TECH]

AP1b. What is the correct number of &AP_TECH that you installed through the &PROGRAM?

ENTER NUMBER		[GO TO AP1c]
[Don't know]	97	[GO TO NEXT &AP_TECH]
[Refused]	98	[GO TO NEXT &AP_TECH]

AP1c. Why did you install a different number of &AP_TECH?

Have no idea why numbers differ	1	[GO TO AP2d]
Put some in storage	2	[GO TO AP2d]
Installed at another residential building	3	[GO TO AP2d]
Funding insufficient to complete full amount	4	[GO TO AP2d]
Other, Specify	_____	[GO TO NEXT &AP_TECH]
[Don't know]	97	[GO TO NEXT &AP_TECH]
[Refused]	98	[GO TO NEXT &AP_TECH]

[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK AP2a THROUGH AP2c.]

Check here if these measures were: Rebated Financed or Directly installed

AP2a. Which of the following kinds of appliances did you install through the EECBG program?

&AP_TECH	
Residential Sized Refrigerator	1
Residential Sized Freezer	2
Larger Standard Refrigerator (>30 cf)	3
Clothes Washer	4
Clothes Dryer	5
Dishwasher	6
[Don't know]	97
[Refused]	98

AP2b. **[FOR EACH APPLIANCE TYPE MENTIONED]** Approximately how many &AP_TECH were installed?

ENTER NUMBER	_____	[GO TO AP2c]
[Don't know]	97	[GO TO AP2c]
[Refused]	98	[GO TO AP2c]

AP2c. How many of the &AP_installed were used to replace existing units?

ENTER NUMBER	_____	[GO TO AP2d]
[Don't know]	97	[GO TO AP2d]
[Refused]	98	[GO TO AP2d]

AP2d. Approximately what was the capacity of each of the units installed to replace existing units?

CAPACITY	_____	ENTER UNITS	_____	[GO TO AP2e]
[Don't know]	97	[Don't know]	97	[GO TO AP2e]
[Refused]	98	[Refused]	98	[GO TO AP2e]

[IF AP2c <&AP_installed, ASK AP2e THROUGH AP2f.]

AP2e-f. Approximately what was the size of the unit installed for new refrigeration capacity? What are the units?

ENTER SIZE	_____	ENTER UNITS	_____	[GO TO AP2]
[Don't know]	97	[Don't know]	97	[GO TO AP2]
[Refused]	98	[Refused]	98	[GO TO AP2]

RESPONSE GRID FOR AP1 AND AP2

	&AP_TECH	AP1a Tracking Verified	AP1b Corrected # Install	AP2b # installed	AP2c # NewCap acity	AP2d #New Capacity Units	AP2e Size	AP2f Size units
1	Residential Sized Refrigerator							
2	Residential Sized Freezer							
3	Larger Standard Refrigerator (>30 cf)							
4	Clothes Washer							
5	Clothes Dryer							
6	Dishwasher							
97	[Refused] (skip to RXX)							
98	[Don't know] (99 skip to RXX)							

ONLY RESPONDENTS WITH WEATHERIZATION (BUILDING SHELL, WINDOWS/DOORS) MEASURES ANSWER QUESTIONS IN THIS MODULE.

RES MODULE 7: WEATHERIZATION (BUILDING SHELLS, WINDOWS/DOORS)
[IF &WEATHERIZE= TRUE

WZ1a. Our records indicate that your organization installed &WZ_AMTof&WZ_TECH through the &PROGRAM, is this correct?

Yes, installed that amount	1	[GO TO WZ1a FOR NEXT &WZ_TECH]
Did not install any of that technology	2	[GO TO WZ1a FOR NEXT &WZ_TECH]
Technology correct, number wrong	3	[GO TO WZ1b]
[Don't know]	97	[GO TO WZ1a FOR NEXT &WZ_TECH]
[Refused]	98	[GO TO WZ1a FOR NEXT &WZ_TECH]

WZ1b. What is the correct amount of &WZ_TECH that you installed?

ENTER NUMBER	_____	[GO TO WZ1c]
[Don't know]	97	[GO TO WZ1c]
[Refused]	98	[GO TO WZ1c]

WZ1c. Why did you install a different amount of &WZ_TECH? [ACCEPT MULTIPLE ANSWERS]

Have no idea why numbers differ	1	[GO TO WZ1a FOR NEXT &WZ_TECH]
Put some in storage	2	[GO TO WZ1a FOR NEXT &WZ_TECH]
Installed at another facility	3	[GO TO WZ1a FOR NEXT &WZ_TECH]
Funding insufficient to complete full amount	4	[GO TO WZ1a FOR NEXT &WZ_TECH]
Other, Specify	_____	[GO TO WZ1a FOR NEXT &WZ_TECH]
[Don't know]	97	[GO TO WZ1a FOR NEXT &WZ_TECH]
[Refused]	98	[GO TO WZ1a FOR NEXT &WZ_TECH]

[ONCE CORRECTIONS RECORDED THEN ASK WZ2c FOR EACH CORRECTED TECHNOLOGY; ELSE GO TO WZ3]

[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK WZ2a THRU WZ2c.]

Check here if these measures were: Rebated Financed or Directly installed

WZ2a. Did you install any Weatherization Measures through the EECBG program?

Yes	1	[GO TO WZ2b]
No	2	[GO TO NEXT SECTION]
[Don't know]	97	[GO TO NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

WZ2b. Which kinds of Weatherization Measures did you install?

WZ2c. Approximately how much/many &WZ_TECH were installed? [FOR EACH MEASURE TYPE MENTIONED.]

RESPONSE GRID FOR WZ1 AND WZ2

	WZ_TECH	WZ1a Tracking Verified?	WZ1b Corrected #/Amt Install	WZ1c Reason for Diff	WZ2a/b Untracked Tech Inst	WZ2c Untracked #/Amt Install	WZ2d Untracked #/Amt Install Units
1	Caulking/weather-stripping						
2	Air sealing						
3	Duct sealing & repair						
4	Attic insulation						
5	Wall insulation						
6	Floor/foundation insulation						
7	Other insulation						
8	Windows						
9	Exterior Doors						
10	Other: specify						

WZ3a. What was the primary fuel used to heat the building(s) before the weatherization measures were installed?

WZ3b. What was the primary type space-heating system before the weatherization measures were installed?

WZ3c. What supplemental fuel(s) were used to heat the building(s) before the weatherization measures were installed?

WZ4a. What was the primary fuel used to heat the building(s) after the weatherization measures were installed?

WZ4b. What was the primary type space-heating system after the weatherization measures were installed?

WZ4c. What supplemental fuel(s) were used to heat the building(s) after the weatherization measures were installed?

RESPONSE GRID FOR WZ3a, 3c AND WZ4a, 4c

	FUEL TYPE	WZ3a Primary fuel before	WZ3c Supp Fuels before	WZ4a Primary fuel after	WZ4c Supp Fuels after
1	Natural Gas				
2	Propane/LPG				
3	Fuel Oil				
4	Electricity				
5	Wood and Biomass				
6	Other (specify:_____)				
97	[Don't know]				
98	[Refused]				

RESPONSE GRID FOR WZ3b AND WZ4b

	SYSTEM TYPE	WZ3b Primary System before	WZ4b Primary System after
1	Central (ducted) warm-air furnace (forced air or gravity, any fuel)		
2	Heat pump		
3	Built in electric units (electric baseboards, ceiling heat)		
4	Steam or hot water system (floor or baseboard radiators, convectors)		
5	Floor, wall or pipeless (ductless) furnace (floor or wall furnace)		
6	Room/space heater (nonportable)		
7	Portable space heater		
8	Other (specify:_____)		
97	[Don't know]		
98	[Refused]		

WZ5a. What type of operable air conditioning system was present in the building(s) before the installation of the weatherization measures?

Central air conditioning/heat pump	1	[GO TO WZ6a]
Window/wall units	2	[GO TO WZ5b]
Evaporative cooling system (swamp coolers)	3	[GO TO WZ6a]
[Don't know]	97	[GO TO WZ6a]
[Refused]	98	[GO TO WZ6a]

WZ5b. How many window/wall air conditioning units were present before the weatherization?

ENTER NUMBER	_____
[Don't know]	97
[Refused]	98

WZ6a. What type of operable air conditioning system is present in the building(s) after the installation of the weatherization measures?

Central air conditioning/heat pump	1	[GO TO WZ1a FOR NEXT &WZ_TECH]
Window/wall units	2	[GO TO WZ6b]
Evaporative cooling system (swamp coolers)	3	[[GO TO WZ1a FOR NEXT &WZ_TECH]
[Don't know]	97	[GO TO WZ1a FOR NEXT &WZ_TECH]
[Refused]	98	[GO TO WZ1a FOR NEXT &WZ_TECH]

WZ6b. How many window/wall air conditioning units are present after the weatherization?

ENTER NUMBER	_____	
[Don't know]	97	
[Refused]	98	

ONLY RESPONDENTS WITH OTHER TECHNOLOGY MEASURES ANSWER QUESTIONS IN THIS MODULE.

RES MODULE 8: OTHER TECHNOLOGY

[IF &OTHER = TRUE]

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK OE1a THRU OE1c.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, ASK OE2a THRU OE2c.]

[REPEAT OE1a THRU OE1c. FOR EACH &OE_TECH IN THE TRACKING DATA.]

Check here if these measures were: Rebated Financed or Directly installed

OE1a. Our records indicate that your organization installed &OE_NUM of &OE_TECH through the &PROGRAM, is this correct?

Yes, installed that number	1	[GO TO OE1a FOR NEXT &OE_TECH]
Did not install any of that technology	2	[GO TO OE1a FOR NEXT &OE_TECH]
Technology correct, number wrong	3	[GO TO OE1b]
[Don't know]	97	[GO TO OE1a FOR NEXT &OE_TECH]
[Refused]	98	[GO TO OE1a FOR NEXT &OE_TECH]

OE1b. What is the correct number of &OE_TECH that you installed through the &PROGRAM?

[ENTER NUMBER]	_____	[GO TO OE1c]
[Don't know]	97	[GO TO OE1c]
[Refused]	98	[GO TO OE1c]

OE1c. Why did you install a different number of &OE_TECH? [\[ACCEPT MULTIPLE ANSWERS\]](#)

Have no idea why numbers differ	1	[GO TO OE1a FOR NEXT &OE_TECH]
Put some in storage	2	[GO TO OE1a FOR NEXT &OE_TECH]
Installed at another facility	3	[GO TO OE1a FOR NEXT &OE_TECH]
Funding insufficient to complete full amount	4	[GO TO OE1a FOR NEXT &OE_TECH]
Other, Specify	_____	[GO TO OE1a FOR NEXT &OE_TECH]
[Don't know]	97	[GO TO OE1a FOR NEXT &OE_TECH]
[Refused]	98	[GO TO OE1a FOR NEXT &OE_TECH]

[\[ONCE CORRECTIONS RECORDED THEN ASK OE2d FOR EACH CORRECTED TECHNOLOGY; ELSE GO TO OE3\]](#)

[\[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK OE2a THRU OE2c.\]](#)

Check here if these measures were: **Rebated** **Financed or** **Directly installed**

OE2a. Did you install any other kinds of energy efficiency measures through the program?

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

OE2b. Which kinds of additional measures did you install through the program?

OE2c. [\[FOR EACH MEASURE TYPE MENTIONED.\]](#) Approximately how many &OE_TECH were purchased using the &SPONSOR &Program funding?

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

OE2e. How many of the &OE_TECH purchased using the &SPONSOR &PROGRAM funding were used to replace existing &OE_TECH units?

RESPONSE GRID FOR OE1 AND OE2

	OE_TECH	OE1a Tracking Verified?	OE1b Corrected # Install	OE1c Reason for Diff	OE2a/b Untracked Tech Inst	OE2c Untracked # Install	OE2d % Space Served	OE2e # replacing existing construction
1	Specify:							
2	Specify:							
3	Specify:							
4	Specify:							
5	Specify:							
6	Specify:							

[FOR EACH MEASURE TYPE REPORTED IN OE1 AND OE2 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]
[Don't know]	97	[GO TO OE3d]
[Refused]	98	[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]
[Don't know]	97	[GO TO OE3d]
[Refused]	98	[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
Poor condition	2
Fair condition	3
Good condition	4
[Don't know]	97
[Refused]	98

OE3e. How old was the removed equipment?

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

RESPONSE GRID OE3

	OE3	OE3a Remove same amount	OE3b Remove more or less	OE3c Amount removed	OE3d Condition removed equip	OE3e Age removed equip
1	Specify:					
2	Specify:					
3	Specify:					
4	Specify:					
5	Specify:					
6	Specify:					

END RESIDENTIAL TRACK

IF RENEWABLE MEASURES = YES THEN GOTO "RENEWABLES MODULE"

IF RENEWABLE MEASURES = NO THEN GOTO SECTION G: ATTRIBUTION"

ACTIVITY = NON-RESIDENTIAL **NON-RESIDENTIAL TRACK**

TRACK 2 NON-RESIDENTIAL ONLY

Non-Res Subsection 1:	Building Characteristics (BC)
Non-Res Subsection 2:	Firmographics (FM)
Non-Res Module 1:	Lighting
Non-Res Module 2:	Lighting (Street/Traffic)
Non-Res Module 3:	Cooling Equipment
Non-Res Module 4:	Heating Equipment
Non-Res Module 5:	Refrigeration
Non-Res Module 6:	Motors
Non-Res Module 7:	Other Technology

NON-RES SUBSECTION 1: BUILDING CHARACTERISTICS (BC)

Now I'd like to ask you some questions about the building(s) and/or facility(ies) treated by the Activity.

BC1. How many square feet were treated through the Activity, in total? (IF [DON'T KNOW] ASK FOR BEST GUESS)

Square feet [GO TO BC3]	
[Don't know]	97
[Refused]	98

BC2. What percent of this square footage would you say is heated or that the heated or cooled floor area is ...? (IF [DON'T KNOW] ASK FOR BEST GUESS)

Enter Percent	
[Don't know]	97
[Refused]	98

BC3. Which of the following fuel sources are used for heating the space? [\[READ LIST; ACCEPT MULTIPLE RESPONSES\]](#)

Electricity	1
Gas	2
Propane	3
Fuel Oil	4
Wood	5
Biomass	6
OPEN\Other-RECORD	—
[Don't know]	97
[Refused]	98

BC4. In what year was your facility built?

Enter Year [GO TO BC6]	&YRB
[Don't know]	97
[Refused]	98

BC5. (IF [DON'T KNOW]) Would you say it was....

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

BC6. With respect to tracking of energy use, please indicate which of the following applies (note all that apply):

The building has an in-house energy manager responsible for all energy-related expenses (Full-time/Part-Time/None)	F P N
The building retains outside management to track and evaluate energy use and costs (Y/N)	Y N
Occupants are provided with regular monthly feedback on energy consumption use (bills or summaries) (Y/N)	Y N
Occupants are provided with detailed usage pattern information, including daily (or less) usage reports (Y/N)	Y N
Occupants are provide with feedback on the results of energy-savings measures that are installed as part of this program (Y/N)	Y N
If Yes, what kind of feedback is provided?	

NON-RES SUBSECTION 2: FIRMOGRAPHICS (FM)

FM1. What is the main business or FUNCTION performed at this facility?

Municipal - Offices	1
Municipal - Fire or Police Station	2
Municipal - Water/wastewater facility	3
Municipal - Storage, garage, etc.	4
Office	5
Retail (non-food)	6
College/University	7
School	8
Grocery Store	9
Restaurant	10
Health Care (other than Hospital)	11
Hospital	12
Hotel or Motel	13
Warehouse	14
Construction	15
Community Service/Church/Temple	16
Industrial Process/ Manufacturing/ Assembly	17
Condo Assoc./Apartment Mgr.	18
Greenhouse	19
Laundry/Cleaners/Carwash other high water usage business	20
Auto repair, welding, other high electricity usage business	21
OPEN\Other - SPECIFY	22
[Don't know]	97
[Refused]	98

FM2. How many people (the number of full time equivalent employees) are currently working at this facility? (IF [DON'T KNOW] ASK FOR BEST GUESS)

Enter Number of people	&NUM
[Don't know]	97
[Refused]	98

FM3. Is this building or facility a leased space or it owner occupied?

Leased space	1
Owner occupied	2
[Don't know]	97
[Refused]	98

ONLY RESPONDENTS WITH LIGHTING MEASURES ANSWER QUESTIONS IN THIS MODULE.

NON-RES MODULE 1: LIGHTING

[IF &LIGHTING = TRUE]

In this section we'll be discussing the lighting project that received support from &SPONSOR &PROGRAM.

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK LI1a THROUGH LI1c.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, ASK LI2a THROUGH LI2c.]

[REPEAT LI1a - LI1c. FOR EACH &LI_TECH IN THE TRACKING DATA.]

NOTE: CALCULATING SAVINGS FROM THIS SURVEY WILL REQUIRE NO. OF BULBS IN EACH LINEAR FLUORESCENT FIXTURE WHICH WILL ADD TOO MUCH LENGTH TO THE SURVEY IF OTHER MEASURE CATEGORIES ARE ALSO TO BE ADDRESSED. IF LIGHTING IS THE ONLY MEASURE, THEN WE WILL PROCEED. IF IT IS NOT, THEN A FOLLOW UP CALL WILL BE REQUIRED TO CAPTURE ALL OF THE NECESSARY DATA.

Check here if these measures were: [] Rebated [] Financed or [] Directly installed

LI1a. Our records indicate that your organization installed/will install &LI_NUM of &LI_TECH through the &PROGRAM, is this correct?

Yes, installed that number	1	[GO TO LI1A FOR NEXT &LI_TECH]
Did not install any of that technology	2	[GO TO LI1A FOR NEXT &LI_TECH]
Technology correct, number wrong	3	[GO TO LI1num]
[Don't know]	97	[GO TO LI1A FOR NEXT &LI_TECH]
[Refused]	98	[GO TO LI1A FOR NEXT &LI_TECH]

LI1b. What is the correct number of &LI_TECH that you installed through the &PROGRAM?

ENTER NUMBER		[GO TO LI1c]
[Don't know]	97	[GO TO LI1A FOR NEXT &LI_TECH]
[Refused]	98	[GO TO LI1A FOR NEXT &LI_TECH]

LI1c. Why did you install a different number of &LI_TECH?

Have no idea why numbers differ	1	[GO TO LI1A FOR NEXT &LI_TECH]
Put some in storage	2	[GO TO LI1A FOR NEXT &LI_TECH]
Installed some at another facility	3	[GO TO LI1A FOR NEXT &LI_TECH]
Insufficient financial resources to complete full amount	4	[GO TO LI1A FOR NEXT &LI_TECH]
Other, Specify _____	____	[GO TO LI1A FOR NEXT &LI_TECH]
[Don't know]	97	[GO TO LI1A FOR NEXT &LI_TECH]
[Refused]	98	[GO TO LI1A FOR NEXT &LI_TECH]

[ONCE ALL &LI_TECHS FROM TRACKING DATA EXHAUSTED, SKIP TO LI3]

[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK LI2a THROUGH LI2c.]

Check here if these measures were: [] **Rebated** [] **Financed or** [] **Directly installed**

LI2a. Which of the following kinds of lighting fixtures, if any, did/will you install with the support provided by the &PROGRAM? [IF [DON'T KNOW], ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO DOES.]

LI2b. Which kinds of lighting controls, if any, did you install with the support provided by the &PROGRAM? [IF [DON'T KNOW], ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO DOES.]

LI2c. Approximately how many lighting fixtures did you purchase using the funds or technical support from the &SPONSOR &PROGRAM?

RESPONSE GRID FOR LI1 AND LI2

	&LI_TECH	LI1a Tracking Verified?	LI1b Corrected # Install	LI1c Reason for Diff	LI2a/b Untracked Tech Inst	LI2c Untracked # Install
	Lamps & Fixtures					
1	High performance T8 (1" diameter bulbs)					
2	T8 fluorescent fixtures (1" diameter bulbs)					
3	T-5 Fixtures					
4	Low watt T8 lamps					
5	HID (High Density Discharge) Fixtures, Pulse Start					
6	High bay fluorescent lighting					
7	Compact Fluorescent, Screw-in Modular					
8	Compact Fluorescent, Hardwire					
9	Cold cathode CFLs					
10	Exit Signs, Compact Fluorescent					
11	Exit Signs, LED					
12	LED Overhead Fixtures					
13	T12 fluorescent fixtures (1.5" diameter bulbs)					
77	Other Fixtures (Specify____)					
	Controls					
12	Time clock controls					
13	Occupancy sensors					
14	Bypass/Delay Timers					
15	Photocell, light sensors					
16	Daylighting control strategies					
78	Other controls (Specify____)					

[FOR EACH FIXTURE TYPE REPORTED IN LI1a AND LI2a, ASK LI3]

LI3. 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, Incandescent	10
Halogen	11
Linear fluorescent with Electronic Ballast	13
Linear fluorescent with Magnetic Ballast	14
Other Fluorescent	19
T5 Fixtures (5/8" diameter)	20
High pressure sodium	21
Metal Halide	22
Mercury Vapor	23
Other (Specify _____)	_____
[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 LI3 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 LI3a FOR NEXT FIXTURE TYPE]
[Don't know]	97	[GO TO LI3a FOR NEXT FIXTURE TYPE]
[Refused]	98	

RESPONSE GRID FOR LI3

	&LI_TECH	LI3 Equipment replaced	LI3a Replaced same #	LI3b Replaced fewer/more	LI3c # Different	LI3d Age of Equipt
	Lamps & Fixtures					
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 _____					

[FOR EACH FIXTURE TYPE REPORTED IN LI1 AND LI2, ASK LI4a]

LI4a. How much total space do the &LI_TECH serve?

ENTER SQUARE FEET	_____	[GO TO LI4b]
[Don't know]	97	[GO TO LI4a FOR NEXT FIXTURE TYPE]
[Refused]	98	[GO TO LI4a FOR NEXT FIXTURE TYPE]

LI4b - LI4l. What types of spaces do the &LI_TECH serve? What percent of the total space served is accounted for by each type of space?

LI4b	Office/Professional
LI4c	Warehouse
LI4d	Food sales
LI4e	Health Care
LI4f	Public assembly
LI4g	Food service
LI4h	Hotel/motel/dorm
LI4i	Retail
LI4j	Non-Food service
LI4k	Education
LI4l	Other

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

RESPONSE GRID FOR LI4

	&LL_TECH	LI4a Sq Ft Lit	LI4b % office/pro fessional	LI4c % warehouse	LI4d % food sales	LI4e % health care	LI4f % public assembly	LI4g % food service	LI4h % hotel/mote l/dorm	LI4i % retail	LI4j % non-food service	LI4k % education	LI4l % other
	Lamps & Fixtures												
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)												

[FOR EACH CONTROL TYPE REPORTED IN LI1 AND LI2, ASK LI5A]

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. After installation, what is the percent reduction in operating hours for the lighting controlled by &LI_TECH?

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

ONLY RESPONDENTS WITH LIGHTING (STREET/TRAFFIC) MEASURES ANSWER QUESTIONS IN THIS MODULE.

NON-RES MODULE 2: LIGHTING (STREET/TRAFFIC)

[IF &LIGHTING (STREET/TRAFFIC) = TRUE]

In this section we'll be discussing the Street and Traffic Lighting that received support from &SPONSOR &PROGRAM.

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK PL1a THROUGH PL1c.

IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, SKIP TO PL3.]

[REPEAT PL1a - PL1c. FOR EACH &PL_TECH IN THE TRACKING DATA.]

Check here if these measures were: [] Rebated [] Financed or [] Directly installed

PL1a. Our records indicate that your organization installed/will install &PL_NUM of &PL_TECH through the &PROGRAM, is this correct?

Yes, installed that number	1	[GO TO PL1A FOR NEXT &PL_TECH]
Did not install any of that technology	2	[GO TO PL1A FOR NEXT &PL_TECH]
Technology correct, number wrong	3	[GO TO PL1num]
[Don't know]	97	[GO TO PL1A FOR NEXT &PL_TECH]
[Refused]	98	[GO TO PL1A FOR NEXT &PL_TECH]

PL1b. What is the correct number of &PL_TECH that you installed through the &PROGRAM?

ENTER NUMBER		[GO TO PL1c]
[Don't know]	97	[GO TO PL1A FOR NEXT &PL_TECH]
[Refused]	98	[GO TO PL1A FOR NEXT &PL_TECH]

PL1c. Why did you install a different number of &PL_TECH?

Have no idea why numbers differ	1	[GO TO PL1A FOR NEXT &PL_TECH]
Put some in storage	2	[GO TO PL1A FOR NEXT &PL_TECH]
Installed some at another facility	3	[GO TO PL1A FOR NEXT &PL_TECH]
Insufficient financial resources to complete full amount	4	[GO TO PL1A FOR NEXT &PL_TECH]
Other, Specify _____	___	[GO TO PL1A FOR NEXT &PL_TECH]
[Don't know]	97	[GO TO PL1A FOR NEXT &PL_TECH]
[Refused]	98	[GO TO PL1A FOR NEXT &PL_TECH]

[ONCE ALL &PL_TECHS FROM TRACKING DATA ARE EXHAUSTED, ASK PL2]

PL2. Are there other types of street/traffic lighting products installed through the &PROGRAM? This includes traffic and pedestrian signals.

YES	1	[GO TO PL3]
NO	2	[GO TO PL4]
[Don't Know]	97	[GO TO PL4]
[Refused]	98	[GO TO PL4]

PL3. Which of the following kinds of lighting products, if any, did/will you install with the support provided by the &PROGRAM? [READ OPTIONS, SELECT ALL THAT APPLY]

Traffic or Pedestrian Signals	1	
Lighting Controls	2	
Other Pole-Mounted Lighting _____	___	
[Don't Know]	97	[ATTEMPT TO GET CONTACT INFO. FOR PERSON WHO KNOWS.]
[Refused]	98	[ATTEMPT TO GET CONTACT INFO. FOR PERSON WHO KNOWS.]

[IF PL3 = "Traffic or Pedestrian Signals" OR ANY &PL_TECH = "Traffic or Pedestrian Signals," ASK PL4a - PL4b.]

PL4a. How many of each of the following kinds of traffic signals did you install with the support provided by the &PROGRAM? [READ OPTIONS AND RECORD QUANTITY FOR EACH]

Signal Type	Quantity	Don't Know	Refused
Red LED Traffic Signals	[Record Quantity]_____	97	98
Yellow LED Traffic Signals	[Record Quantity]_____	97	98
Green LED Traffic Signals	[Record Quantity]_____	97	98
LED Arrows	[Record Quantity]_____	97	98
LED Walk / Don't Walk Signals	[Record Quantity]_____	97	98
Other, [Describe_____]	[Record Quantity]_____	97	98

PL4b. What type of bulb did the traffic signals have previously?

[READ OPTIONS FOR EACH PL4a RESPONSE WHICH WAS GREATER THAN ZERO, AND RECORD TYPE FOR EACH]

Traffic Signal Type	Record Bulb Type					
	Incandescent	Fluorescent	LED	Other, Describe	Don't Know	Refused
Red Traffic Signals	1	2	3	_____	97	98
Yellow Traffic Signals	1	2	3	_____	97	98
Green Traffic Signals	1	2	3	_____	97	98
Arrows	1	2	3	_____	97	98
Walk / Don't Walk Signals	1	2	3	_____	97	98
Other	1	2	3	_____	97	98

[IF PL3 = "Lighting Controls" OR ANY &PL_TECH = "Lighting Controls," ASK PL5a - PL5e.]

PL5a. What type of controls did you install with the support provided by the &PROGRAM? [CIRCLE ALL THAT APPLY]

Early-Morning Shutoff Controls	1
Remote Telephone or Electronic Controls	2
Occupancy Sensors	3
Other, [Describe_____]	____
[Don't Know]	97
[Refused]	98

[ASK PL5b THROUGH PL5e FOR EACH RESPONSE TO PL5a]

PL5b. Approximately how many lighting fixtures does the [READ RESPONSE TO PL5a] turn off?

[RECORD NUMBER]	_____
Don't Know	97
Refused	98

PL5c. What is the average wattage of these fixtures?

[RECORD NUMBER]	_____
Don't Know	97
Refused	98

PL5d. What type of control was used prior to this?

Daylight Sensor	1
Time Clock	2
No Control - Always On	3
Other, [Describe_____]	___
[Don't Know]	97
[Refused]	98

PL5e. How many hours per day are the fixtures off due to this control, where they would have been on otherwise?

[RECORD NUMBER]	_____
Don't Know	97
Refused	98

[IF PL3 = "Other Street and Traffic" OR ANY &PL_Tech = "Other Street and Traffic," ASK PL5a - PL5b.]

PL6a. What type of fixtures did you install with the support provided by the &PROGRAM? [CIRCLE ALL THAT APPLY]

Fluorescent	1
Metal Halide	2
High Pressure Sodium	3
LED	4
Induction	5
Other, [Describe_____]	___
[Don't Know]	97
[Refused]	98

[ASK PL6b THROUGH PL6e FOR EACH RESPONSE TO PL6a]

PL6b. Approximately how many lighting fixtures does the [READ RESPONSE TO PL6a] turn off?

[RECORD NUMBER]	_____
Don't Know	97
Refused	98

PL6c. What is the average wattage of these fixtures?

[RECORD NUMBER]	_____
Don't Know	97
Refused	98

PL6d. What type of fixtures did these replace? [\[CIRCLE ALL THAT APPLY\]](#)

Fluorescent	1
Metal Halide	2
High Pressure Sodium	3
LED	4
Induction	5
Other, [Describe _____]	___
[Don't Know]	97
[Refused]	98

PL6e. What is the average wattage of the replaced fixtures?

[RECORD NUMBER]	_____
Don't Know	97
Refused	98

PL6f. Did you remove the same number of old fixtures as you installed through the project?

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

PL6g. How many fixtures did you have before?

[RECORD NUMBER]	_____
Don't Know	97
Refused	98

ONLY RESPONDENTS WITH COOLING MEASURES ANSWER QUESTIONS IN THIS MODULE.

NON-RES MODULE 3: COOLING EQUIPMENT

[IF &COOLING = TRUE]

Now we would like to discuss the cooling project that received funding from &SPONSOR &PROGRAM

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK CL1 THROUGH CL6a.

IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, SKIP TO CL-N1]

[REPEAT CL1 THROUGH CL6a FOR EACH &C_TECH IN THE TRACKING DATA.]

Check here if these measures were: [] Rebated [] Financed or [] Directly installed

CL1. Our records indicate that you installed &CTECH_NUM &C_TECH through the &PROGRAM. Is that correct?

Yes, installed that number	1	[GO TO CL3]
Did not install any of that technology	2	[GO TO CL1 FOR NEXT &C_TECH]
Technology correct, number wrong	3	[GO TO CL2a]
[Don't know]	97	[GO TO CL1 FOR NEXT &C_TECH]
[Refused]	98	[GO TO CL1 FOR NEXT &C_TECH]

CL2a. How many &C_TECH did you install?

RECORD NUMBER	_____	[GO TO CL2b]
[Don't know]	97	[GO TO CL2b]
[Refused]	98	[GO TO CL2b]

CL2b. Why did you install a different number of &C_TECH?

Have no idea why numbers differ	1	[GO TO CL3]
Put some in storage	2	[GO TO CL3]
Installed some at another facility	3	[GO TO CL3]
Insufficient financial resources to complete full amount	4	[GO TO CL3]
Other, Specify_____	_____	[GO TO CL3]
[Don't know]	97	[GO TO CL3]
[Refused]	98	[GO TO CL3]

CL3. Our records indicate that the &CTECH_NUM &C_TECH had a total capacity of &CTECH_CAP &CTECH_CAP_UNITS. Is that correct?

Yes	1	[GO TO CL5]
No	2	[GO TO CL4a]
[Don't know]	97	[GO TO CL5]
[Refused]	98	[GO TO CL5]

CL4a. What is the correct total capacity?

RECORD CAPACITY NUMBER	_____	[GO TO CL4b]
RECORD CAPACITY UNITS (TONS, BTU/HOUR, THERM, ETC)	_____	[GO TO CL4b]
[Don't know]	97	[GO TO CL4b]
[Refused]	98	[GO TO CL4b]

CL4b. Why was the capacity of &C_TECH different?

Have no idea why numbers differ	1	[GO TO CL5]
Installed some at another facility	3	[GO TO CL5]
Insufficient financial resources to complete full amount	4	[GO TO CL5]
Other, Specify _____	_____	[GO TO CL5]
[Don't know]	97	[GO TO CL5]
[Refused]	98	[GO TO CL5]

CL5. Our records indicate the &CTECH have an efficiency rating of &CTECH_EFF &CTECH_EFF_UNITS. Is that correct?

Yes	1	[GO TO CL7]
No	2	[GO TO CL6a]
[Don't know]	97	[GO TO CL7]
[Refused]	98	[GO TO CL7]

CL6a. What is the correct efficiency rating?

RECORD EFFICIENCY NUMBER		[GO TO CL1 FOR NEXT &C_TECH]
RECORD EFFICIENCY UNIT (EER, SEER, KW/TON, or specify other)		[GO TO CL1 FOR NEXT &C_TECH]
[Don't know]	97	[GO TO CL1 FOR NEXT &C_TECH]
[Refused]	98	[GO TO CL1 FOR NEXT &C_TECH]

RESPONSE GRID FOR CL1 TO CL6a

	ITEM	CL1	CL2a	CL2b	CL3	CL4a	CL4b	CL5	CL6a	CL7a	CL7b
1	Split system (two components; compressor is separate from the supply air fan, air conditioner, or heat pump)										
2	Packaged systems (one component; rooftop units)										
3	Package Terminal A/C or Heat Pump (e.g., Hotel/Motel units)										
4	Evaporative coolers (swamp coolers)										
6	Water Chiller/Cooling Towers (Central plant)										
6	Individual A/C or Heat Pump Units (e.g., Unitary Equipment single unit for small business)										
7	Window/Wall Units										
77	Other (Specify)										
97	[Don't know]										
98	[Refused]										

[AFTER ALL MEASURES IN TRACKING DATA EXHAUSTED, SKIP TO CL7a]

USE THE CL-N1 TO CL-N4 SEQUENCE IF THE PROGRAM TRACKING DATABASE DOES NOT CONTAIN MEASURE-LEVEL DATA

CL-N1. What types of cooling equipment did you install with the assistance of EECBG for PROJECT_TITLE? **[MARK ALL THAT APPLY IN LIST IN THE RESPONSE GRIDE; REPEAT SEQUENCE FOR EACH TYPE OF EQUIPMENT]**

Split system	1	[GO TO CL-N2]
Packaged system	2	[GO TO CL-N2]
Packaged Terminal AC or Heat pump	3	[GO TO CL-N2]
Evaporative cooler	4	[GO TO CL-N2]
Water chiller / Cooling tower	5	[GO TO CL-N2]
Individual AC or Heat pump units	6	[GO TO CL-N2]
Window / Wall units	7	[GO TO CL-N2]
Other (Specify_____)	—	[GO TO CL-N2]
[Don't know]	97	[ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO KNOWS. THEN NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

CL-N2. How many units of &C_TECH did you install?

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

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

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

CL-N4. What was the efficiency rating of the &CTECH_EFF units that you installed through &PROJECT_TITLE?
[\[RECORD FOR ALL UNITS INSTALLED THROUGH &PROGRAM.\]](#)

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 CL-N1 TO CL-N4

	ITEM	CL-N1	CL-N2 Number	CL-N3 Capacity Number	CL-N3 Capacity Units	CL-N4 Efficiency Number	CL-N4 Efficiency Units	CL7a	CL7b
1	Split system (two components; compressor is separate from the supply air fan, air conditioner, or heat pump)								
2	Packaged systems (one component; rooftop units)								
3	Package Terminal A/C or Heat Pump (e.g., Hotel/Motel units)								
4	Evaporative coolers (swamp coolers)								
6	Water Chiller/Cooling Towers (Central plant)								
6	Individual A/C or Heat Pump Units (e.g., Unitary Equipment, Central A/C with multiple units, single unit for small business)								
7	Window/Wall Units								
-	Other (Specify)								

[\[ASK CL7a AND CL7b FOR EACH MEASURE IDENTIFIED IN CL1 AND CL-N1\]](#)

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 CL7c]
[Don't know]	97	[GO TO CL7c]
[Refused]	98	[GO TO CL7c]

CL7c. Have there been any major changes in cooling load corresponding to the new equipment installation, such as addition on building, change in heat-producing equipment, large change in # of occupants, etc.? [READ LIST]

Addition on building	1
Change in heat-producing equipment	2
Large change in # of occupants	3
Other, etc.	_____
[Don't know]	97
[Refused]	98

[ASK CL8a THROUGH CL8f FOR EACH MEASURE IDENTIFIED IN CL1 AND 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 through the program.

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

Split system	1
Packaged system	2
Packaged Terminal AC or Heat pump	3
Evaporative cooler	4
Water chiller / Cooling tower	5
Individual AC or Heat pump units	6
Window / Wall units	7
[Other (Specify _____)]	___
[Don't know]	97
[Refused]	98

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 unit(s) that was/were removed and replaced? Was it (Were they)...

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 unit(s)?

RECORD EFFICIENCY NUMBER		[GO TO NEXT CL8a]
RECORD EFFICIENCY UNIT (EER, SEER, KW/TON)		[GO TO NEXT CL8a]
[Don't know]	97	[GO TO CL8f]
[Refused]	98	[GO TO CL8f]

CL8f. On average, how old was the equipment that was removed and replaced? Would you say...

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]
[Don't know]	97	[GO TO NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

RESPONSE GRID FOR CL8

		CL8a	CL8b	CL8c	CL8d	CL8e Number	CL8e Units	CL8f
0	No A/C Removed		skip	skip	skip	skip	skip	skip
1	Split system (two components; compressor is separate from the supply air fan, air conditioner, or heat pump)							
2	Packaged systems (one component; rooftop units)							
3	Package Terminal A/C or Heat Pump (e.g., Hotel/Motel units)							
4	Evaporative coolers (swamp coolers)							
5	Water Chiller/Cooling Towers (Central plant)							
6	Individual A/C or Heat Pump Units (e.g., Unitary Equipment, Central A/C with multiple units, single unit for small business)							
7	Window/Wall Units							
77	Other (Specify)							

CL9a. Did you install any heating or cooling controls or variable speed drives as part of the project supported by &PROGRAM in the facility at &SERV_ADDR?

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? Were these: [SELECT ALL THAT APPLY]

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

[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	_____	[GO TO CL9d]
[Don't know]	97	[GO TO CL9d]
[Refused]	98	[GO TO CL9d]

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

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

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

Inoperable (broken)	1	[GO TO CL9f]
Poor condition	2	[GO TO CL9f]
Fair condition	3	[GO TO CL9f]
Good condition	4	[GO TO CL9f]
[Don't know]	97	[GO TO CL9f]
[Refused]	98	[GO TO CL9f]

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

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]
[Don't know]	97	[GO TO NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

RESPONSE GRID FOR CL9

	New Installed Equipment Type	CL9a	CL9b	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)						
97	[Don't know]						
98	[Refused]						

ONLY RESPONDENTS WITH HEATING MEASURES ANSWER QUESTIONS IN THIS MODULE.

NON-RES MODULE 4: HEATING EQUIPMENT

[IF &HEATING = TRUE]

Now we would like to discuss the heating project that received funding from EECBG for &PROJECT_TITLE.

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE, ASK HT1 THROUGH HT6a.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, SKIP TO HT-N1]

[REPEAT HT1 THROUGH HT6a FOR EACH &H_TECH IN THE TRACKING DATA.]

Check here if these measures were: Rebated Financed or Directly installed

HT1. Our records indicate that you installed &HTECH_NUM &H_TECH through the EECBG program. Is that correct?

Yes, installed that number	1	[GO TO HT3]
Did not install any of that technology	2	[GO TO HT1 FOR NEXT &H_TECH]
Technology correct, number wrong	3	[GO TO HT2a]
[Don't know]	97	[GO TO HT1 FOR NEXT &H_TECH]
[Refused]	98	[GO TO HT1 FOR NEXT &H_TECH]

HT2a. How many &H_TECH did you install?

RECORD NUMBER	_____	[GO TO HT2B]
[Don't know]	97	[GO TO HT3]
[Refused]	98	[GO TO HT3]

HT2b. Why did you install a different number of &H_TECH?

Have no idea why numbers differ	1
Put some in storage	2
Installed some at another facility	3
Insufficient financial resources to complete full amount	4
Other, Specify _____	_____
[Don't know]	97
[Refused]	98

HT3. Our records indicate that the &HTECH_NUM &H_TECH had a total capacity of &HTECH_CAP &HTECH_CAP_UNITS. Is that correct?

Yes	1	[GO TO HT5]
No	2	[GO TO HT4a]
[Don't know]	97	[GO TO HT5]
[Refused]	98	[GO TO HT5]

HT4a. What is the correct total capacity?

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

HT4b. Why was the capacity of &H_TECH different?

Have no idea why numbers differ	1
Installed some at another facility	2
Insufficient financial resources to complete full amount	3
Other, Specify _____	____
[Don't know]	97
[Refused]	98

HT5. Our records indicate the &HTECH have an efficiency rating of &HTECH_EFF &HTECH_EFF_UNITS. Is that correct?

Yes	1	[GO TO HT8a]
No	2	[GO TO HT6a]
[Don't know]	97	[GO TO HT8a]
[Refused]	98	[GO TO HT8a]

HT6a. What is the correct efficiency rating?

RECORD EFFICIENCY NUMBER		[GO TO HT1 FOR NEXT &H_TECH]
RECORD EFFICIENCY UNIT (AFUE, thermal efficiency, or specify other)		[GO TO HT1 FOR NEXT &H_TECH]
[Don't know]	97	[GO TO HT1 FOR NEXT &H_TECH]
[Refused]	98	[GO TO HT1 FOR NEXT &H_TECH]

RESPONSE GRID FOR HT1 TO HT6a

	ITEM	HT1	HT2a	HT2b	HT3	HT4a	HT4b	HT5	HT6a
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)								
97	[Don't know]								
98	[Refused]								

USE THE HT-N1 TO HT-N4 SEQUENCE IF THE PROGRAM TRACKING DATABASE DOES NOT CONTAIN MEASURE-LEVEL DATA

HT-N1. What types of heating equipment did you install with the assistance of &PROG at &SERV_ADD? **[ALLOW MULTIPLE ANSWERS]**

Central Boilers	1	[GO TO HT-N2]
Packaged Heating Units	2	[GO TO HT-N2]
Individual Space Heater / Portable Room Heater / Strip Heating	3	[GO TO HT-N2]
Split-system Heat Pumps	4	[GO TO HT-N2]
Central Furnaces	5	[GO TO HT-N2]
Radiant Heaters	7	[GO TO HT-N2]
Other (Specify)	77	[GO TO HT-N2]
[Don't know]	97	ATTEMPT TO GET CONTACT INFORMATION OF PERSON WHO DOES KNOW. [THEN GO TO NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]
Packaged Heating Units	2	[GO TO HT-N2]

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

HT-N4. What was the efficiency rating and capacity of the &HTECH_EFF units that you installed? [RECORD FOR ALL UNITS INSTALLED THROUGH &PROGRAM.]

RECORD EFFICIENCY NUMBER		[GO TO NEXT HT-N1]
RECORD EFFICIENCY UNIT (AFUE, Thermal efficiency, specify other)		[GO TO NEXT HT-N1]
CAPACITY (tons)		[GO TO NEXT HT-N1]
[Don't know]	97	[GO TO NEXT HT-N1]
[Refused]	98	[GO TO NEXT HT-N1]

RESPONSE GRID FOR HT-N1 TO HT-N4

	ITEM	HT-N1	HT-N2	HT-N3 Number	HT-N3 Units	HT-N4 Efficiency Number	HT-N4 Eff Units	HT-N4 Capacity
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 HT1 AND HT-N1]

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

SELECT EQUIPMENT TYPE		[GO TO 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. 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 the unit(s) 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 and capacity of the units you removed?

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

HT8f. On average, how old was the unit that was removed and replaced? Would you say [ASK FOR EACH UNIT REMOVED]...

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]
[Refused]	98	[GO TO NEXT HT8a]

RESPONSE GRID FOR HT8

		HT8a	HT8b	HT8c	HT8d	HT8e Efficiency Number	HT8e Efficiency Units	HT8e Capacity	HT8f
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)								

HT9a. Did you install any heating or heating controls or variable speed drives as part of &PROJECT_TITLE?

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
Energy Management System	2
HVAC Controls: Manual thermostat	3
HVAC Controls: Bypass Timer	4
HVAC Controls: Time HTock	5
HVAC Controls: Set-Back Programmable Thermostat	6
CO2 Sensors/Demand Control Ventilation	7
Economizers	8
Other, Specify_____	___
[Don't know]	97
[Refused]	98

[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 _____	___	[GO TO HT9e]
[Don't know]	97	[GO TO HT9e]
[Refused]	98	[GO TO HT9e]

HT9e. Generally, how would you describe the condition of 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...

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]
[Don't know]	97	[GO TO NEXT SECTION]
[Refused]	98	[GO TO NEXT SECTION]

RESPONSE GRID FOR HT9

		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]				

ONLY RESPONDENTS WITH REFRIGERATION MEASURES ANSWER QUESTIONS IN THIS MODULE.

NON-RES MODULE 5: REFRIGERATION

[IF &REFRIGERATION = TRUE]

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK RF1a THROUGH RF1c.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, ASK RF2a THROUGH RF2c. REPEAT RF1a THROUGH RF1c. FOR EACH &RF_TECH IN THE TRACKING DATA.]

Check here if these measures were: Rebated Financed or Directly installed

RF1a. Our records indicate that your organization installed &RF_NUM of &RF_TECH through the &PROGRAM, is this correct?

Yes, installed that number	1	[GO TO NEXT &RF_TECH]
Did not install any of that technology	2	[GO TO NEXT &RF_TECH]
Technology correct, number wrong	3	[GO TO RF1b]
[Don't know]	97	[GO TO NEXT &RF_TECH]
[Refused]	98	[GO TO NEXT &RF_TECH]

RF1b. What is the correct number of &RF_TECH that you installed through the &PROGRAM?

ENTER NUMBER		[GO TO NEXT &RF_TECH]
[Don't know]	97	[GO TO NEXT &RF_TECH]
[Refused]	98	[GO TO NEXT &RF_TECH]

RF1c. Why did you install a different number of &RF_TECH?

Have no idea why numbers differ	1	[GO TO RF2d]
Put some in storage	2	[GO TO RF2d]
Installed at another facility	3	[GO TO RF2d]
Funding insufficient to complete full amount	4	[GO TO RF2d]
Other	___	[GO TO RF2d]
[Don't know]	97	[GO TO RF2d]
[Refused]	98	[GO TO RF2d]

[ONCE CORRECTIONS RECORDED, IF RF1a ≠ 1 THEN ASK RF2d FOR EACH CORRECTED TECHNOLOGY; ELSE GO TO RF3a]

[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK RF2a THROUGH RF2d.]

Check here if these measures were: Rebated Financed or Directly installed

RF2a. Which of the following kinds of refrigeration equipment did you install through the program?

&RF_TECH	
Residential Sized Refrigerator	1
Residential Sized Freezer	2
Larger Standard Refrigerator (>30 cf)	3
Self Contained - Coffin/Horizontal Case	4
Self Contained - Vertical Case (multi shelf)	5
Single-Deck display cases - Open single-deck	6
Single-Deck display cases -	7
Multi-Deck (vertical) display cases - Open/reach-in	8
Multi-Deck (vertical) display cases - Glass-door cases	9
Walk-Ins - Freezer/Low Temp	10
Walk-Ins - Cooler/Med Temp	11
Night covers for display cases	12
Strip curtains	13
Glass doors on vertical open display cases	14
Main door cooler/freezer door gaskets	15
Auto closers for coolers/freezers	16
Anti-sweat heat controllers	17
[Don't know]	97
[Refused]	98

RF2b. Which kinds of refrigeration controls, if any, did you install through the program?

RF2c. Approximately how many &RF_TECH were purchased using the &SPONSOR &PROGRAM funding?

RF2d. How many of the &RF_TECH purchased using the &SPONSOR &PROGRAM funding were used to replace existing units?

RF2e. Please confirm <(&RF_NUM or Number from RF1b or RF2c) - (RF2d)> whether the &RF_TECH units purchased through &PROJECT_TITLE funding were used to increase your refrigeration capacity.

Yes	1	[GO TO RF2f]
No	2	[REPEAT RF2d and RF2e]
[Don't know]	98	[GO TO NEXT &RF_TECH]
[Refused]	97	[GO TO NEXT &RF_TECH]

[IF RF2d > 0 THEN ASK RF2f]

RF2f. Approximately what was the size of each of the units installed to replace existing units?

RF2g. How many of each type of units were installed?

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

[IF RF2e > 0 THEN ASK RF2h]

RF2h. Approximately what was the size of the units installed for new refrigeration capacity?

RF2i. [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]

[IF &RF_TECH = 10 or 11 THEN ASK RF2j; ELSE GO TO RF3a]

RF2j. How many hours per day is the refrigerator/freezer 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 RF2d]
[Don't know]	97	[GO TO RF2d]
[Refused]	98	[GO TO RF2d]

RF2l. Does your &RF_TECH have strip curtains or another type of insulation?

Yes- Strip Curtains	1
Yes - Other Type of Insulation [RECORD TYPE _____]	2
No	3
[Don't know]	97
[Refused]	98

RESPONSE GRID FOR RF1 AND RF2

	&RF_TECH	RF1a Tracking Verified	RF1b Corrected # Install	RF1c Reason for Diff	RF2a/b Untracked Tech Inst	RF2c Untracked # Install	RF2d # Replace	RF2e # New Capacity	RF2 f Size	RF2g Size units	RF2h Size New Capacity	RF2i Units New Capacity	RF2j Hours Open	RF2k Traffic	RF2l Insul- ation
1	Residential Sized Refrigerat or														
2	Residential Sized Freezer														
3	Larger Standard Refrigerat or (>30 cf)														
4	Self Contained - Coffin/Hori zontal 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/reac h-in														
9	Multi-Deck (vertical) display cases - Glass-door cases														
10	Walk-Ins - Freezer/Lo w Temp														

	&RF_Tech	RF1a Tracking Verified	RF1b Corrected # Install	RF1c Reason for Diff	RF2a/b Untracked Tech Inst	RF2c Untracked # Install	RF2d # Replace	RF2e # New Capacity	RF2f Size	RF2g Size units	RF2h Size New Capacity	RF2i Units New Capacity	RF2j Hours Open	RF2k Traffic	RF2l Insulation
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														
97	[Refused] (skip to RXX)														
98	[Don't know] (99 skip to RXX)														

FOR EACH TYPE OF EQUIPMENT RECORDED AS INSTALLED IN RF1a OR RF2 WHERE &RF_Tech EQUALS 1 - 11 or 77 and RF2d >0, ASK RF3

RF3a. Did you remove the same amount of refrigeration equipment as you installed through the project, in terms of <&RF2g UNITS> of capacity?

Yes	1	[GO TO RF3d]
No	2	[GO TO RF3b]
[Don't know]	97	[GO TO RF3d]
[Refused]	98	[GO TO RF3d]

RF3b. Did you remove more or less equipment than you installed through the project?

More	1	[GO TO RF3c]
Less	2	[GO TO RF3c]
[Don't know]	97	[GO TO RF3d]
[Refused]	98	[GO TO RF3d]

RF3c. How much more/fewer <&RF2e UNITS> of capacity did you install?

ENTER SIZE	_____	UNITS	__&RF2e__
[Don't know]	97	[Don't know]	
[Refused]	98	[Refused]	

RF3d On average,how old was the removed equipment ?

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

RF3e. What percent of the removed 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]
[Don't know]	97	[GO TO RF3a FOR NEXT &RF_TECH]
[Refused]	98	[GO TO RF3a FOR NEXT &RF_TECH]

RESPONSE GRID FOR RF1 AND RF2

	&RF_TECH	RF3a Remove same amount Y/N	RF3b More of less removed	RF3c Amount removed	RF3d Age	RF3e Percent not removed	RF3e Percent Landfill	RF3e Percent Moved	RF3e Percent Sold	RF3e Percent Scrapped
1	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									
77	Other (specify)									
98	[Refused] (skip to RXX)									
97	[Don't know] (99 skip to RXX)									

ONLY RESPONDENTS WITH MOTORS MEASURES ANSWER QUESTIONS IN THIS MODULE.

NON-RES MODULE 6: MOTORS

[IF &MEASURE = MOTOR]

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK MT1a THRU MT1c.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, ASK MT2a.]

[REPEAT MT1a THRU MT1c. FOR EACH &MT_Tech IN THE TRACKING DATA.]

Check here if these measures were: Rebated Financed or Directly installed

MT1a. Our records indicate that your organization installed &MT_NUM of electric motors through the EECBG &PROJECT_TITLE, is this correct?

Yes, installed that number	1	[GO TO MT2b]
Did not install any of that technology	2	[GO TO NEXT TECHNOLOGY]
Technology correct, number wrong	3	[GO TO MT1b]
[Don't know]	97	[GO TO NEXT TECHNOLOGY]
[Refused]	98	[GO TO NEXT TECHNOLOGY]

MT1b. What is the correct number of electric motors that you installed through the &PROGRAM?

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

MT1c. Why did you install a different number of motors?

Have no idea why numbers differ	1
Put some in storage	2
Installed at another facility	3
Funding insufficient to complete full amount	4
Other	_____
[Don't know]	97
[Refused]	98

[AFTER ALL &M_Tech IN THE TRACKING DATA ARE VERIFIED, GO TO MT2b]

[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK MT2a]

Check here if these measures were: Rebated Financed or Directly installed

MT2a. How many electric motors did you purchase and install through the program?

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]

MT2b. How many motors between &LHP and &HHP did you purchase with the assistance of the &PROGRAM?
[TOTAL SHOULD ADD TO MT1a or MT2a]

ENTER NUMBER	_____
[Don't know]	97
[Refused]	98

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

ENTER NUMBER	_____
[Don't know]	97
[Refused]	98

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

ENTER NUMBER	_____
[Don't know]	97
[Refused]	98

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

ENTER NUMBER	_____
[Don't know]	97
[Refused]	98

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

ENTER NUMBER	_____
[Don't know]	97
[Refused]	98

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 through the program 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 MT1

	MT HP Category	MT1a Tracking Verified?	MT1b Corrected # Install	MT1c Reason for Diff	MT 2a/b Mot Inst	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:

[\[FOR EACH MT HP GROUP POPULATED IN MT1 GRID, ASK MT3\]](#)

NOTE: GIVEN THAT THE EPACT 1992 STANDARDS WENT INTO EFFECT IN 1997, WE WILL ASSUME THAT MOTORS REPLACED MET EPACT 1992 STANDARDS UNLESS THEY WERE 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 through this project?

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

MT3b. How many of those motors between &LHP and &HHP had been rewound?

ENTER NUMBER <96 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, non-HVAC	2
Fan, non-HVAC	3
Air Compressor	4
Conveyor belt or other materials handling	5
Production process machinery	6
Other, Specify _____	77
[Don't know]	97
[Refused]	98

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	MT 3c 77 Other
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 HOUR ESTIMATES IN TECHNICAL RESOURCE MANUALS. THESE QUESTIONS ARE DESIGNED TO PROBE OPERATING HOURS FOR MOTORS THAT OPERATE PRODUCTION EQUIPMENT.

IF ANY MT3c1 THROUGH MT3c6 = 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]	_____
[Don't know]	97
[Refused]	98

MT4b. How many days per week?

[RECORD DAYS]	_____
[Don't know]	97
[Refused]	98

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	[GO TO MT3a FOR NEXT MT3c]
[Don't know]	97	[GO TO MT3a FOR NEXT MT3c]
[Refused]	98	[GO TO MT3a FOR NEXT MT3c]

MT4d. How many hours per day does the MT3c equipment typically operate during the periods with different operating schedules?

RECORD HOURS	_____
[Don't know]	97
[Refused]	98

MT4e. How many days per week does the equipment typically operate during the periods with different operating schedules?

RECORD DAYS	_____
[Don't know]	97
[Refused]	98

MT4f. How many months per year does the equipment run on the alternative schedule?

RECORD DAYS	_____	MT4a FOR NEXT MT3c
[Don't Know]	97	MT4a FOR NEXT MT3c
[Refused]	98	MT4a FOR NEXT MT3c

RESPONSE GRID MT4

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

ONLY RESPONDENTS WITH OTHER TECHNOLOGY MEASURES ANSWER QUESTIONS IN THIS MODULE.

NON-RES MODULE 7: OTHER TECHNOLOGY

[IF & OTHER = TRUE]

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE ASK OE1a THRU OE1c.
IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, ASK OE2a THRU OE2c.]

[REPEAT OE1a THRU OE1c. FOR EACH &OE_TECH IN THE TRACKING DATA.]

Check here if these measures were: Rebated Financed or Directly installed

OE1a. Our records indicate that your organization installed &OE_NUM of &OE_TECH through the &PROGRAM, is this correct?

Yes, installed that number	1	[GO TO OE1a FOR NEXT &OE_TECH]
Did not install any of that technology	2	[GO TO OE1a FOR NEXT &OE_TECH]
Technology correct, number wrong	3	[GO TO OE1b]
[Don't know]	97	[GO TO OE1a FOR NEXT &OE_TECH]
[Refused]	98	[GO TO OE1a FOR NEXT &OE_TECH]

OE1b. What is the correct number of &OE_TECH that you installed through the &PROGRAM?

ENTER NUMBER	_____	[GO TO OE1c]
[Don't know]	97	[GO TO OE1c]
[Refused]	98	[GO TO OE1c]

OE1c. Why did you install a different number of &OE_TECH? [ACCEPT MULTIPLE ANSWERS]

Have no idea why numbers differ	1	[GO TO OE1a FOR NEXT &OE_TECH]
Put some in storage	2	[GO TO OE1a FOR NEXT &OE_TECH]
Installed at another facility	3	[GO TO OE1a FOR NEXT &OE_TECH]
Funding insufficient to complete full amount	4	[GO TO OE1a FOR NEXT &OE_TECH]
Other	_____	[GO TO OE1a FOR NEXT &OE_TECH]
[Don't know]	97	[GO TO OE1a FOR NEXT &OE_TECH]
[Refused]	98	[GO TO OE1a FOR NEXT &OE_TECH]

[ONCE CORRECTIONS RECORDED THEN ASK OE2d FOR EACH CORRECTED TECHNOLOGY; ELSE GO TO OE3]

[IF MEASURE-LEVEL DATA ARE NOT AVAILABLE, ASK OE2a THRU OE2c.]

Check here if these measures were: Rebated Financed or Directly installed

OE2a. Did you install any other kinds of energy efficiency measures through the program?

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

OE2b. Which kinds of additional measures did you install through the program?

OE2c. [FOR EACH MEASURE TYPE MENTIONED.] Approximately how many &OE_TECH were purchased using the &SPONSOR &Program funding?

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

OE2e. How many of the &OE_TECH purchased using the &SPONSOR &PROGRAM funding were used to replace existing &OE_TECH units?

RESPONSE GRID FOR OE1 AND OE2

	OE_TECH	OE1a Tracking Verified?	OE1b Corrected # Install	OE1c Reason for Diff	OE2a/b Untracked Tech Inst	OE2c Untracked # Install	OE2d % Space Served	OE2e # replacing existing construction
1	Specify:							
2	Specify:							
3	Specify:							
4	Specify:							
5	Specify:							
6	Specify:							

[FOR EACH MEASURE TYPE REPORTED IN OE1 AND OE2 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 number of &OE_TECH as you installed through the project?

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

OE3b. Did you remove more or less number of &OE_TECH than you installed through the project?

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

OE3c. How many 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
Poor condition	2
Fair condition	3
Good condition	4
[Don't know]	97
[Refused]	98

OE3e. How old was the removed equipment?

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

RESPONSE GRID OE3

	OE3	OE3a Remove same amount	OE3b Remove more or less	OE3c Amount removed	OE3d Condition removed equip	OE3e Age removed equip
1	Specify:					
2	Specify:					
3	Specify:					
4	Specify:					
5	Specify:					
6	Specify:					

COMMENT: In order to understand the potential energy savings results from &MEASURE, we may conduct a follow up call with you.

END NON-RESIDENTIAL TRACK

IF RENEWABLE MEASURES = YES THEN GOTO "RENEWABLES MODULE"

IF RENEWABLE MEASURES = NO THEN GOTO "SECTION G:ATTRIBUTION"

ONLY RESPONDENTS WITH RENEWABLES MEASURES ANSWER QUESTIONS IN THIS MODULE.

RENEWABLES MODULE

RENEWABLES SUBMODULE: PV SOLAR PANELS

[IF &PV SOLAR PANELS = TRUE]

In this section we'll be discussing the solar photovoltaic project that received support from &SPONSOR &PROGRAM.

UNITS

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE, ASK QUESTIONS PVU1 THROUGH PVU4]

With Measure Data

Check here if these measures were: Rebated Financed or Directly installed

PVU1. Our records indicate that you installed &PV_TECH PV panels through the &PROGRAM. Is this correct?

[YES]	1	[GO TO PVU2]
[NO]	2	[GO TO PVU1a]
[DON'T KNOW]	97	[GO TO PVU1a]
[REFUSED]	98	[GO TO PVU1a]

PVU1a. What is the manufacturer and model number of your PV panels?

RECORD MANUFACTURER RECORD MODEL	_____	[GO TO PVU2]
[DON'T KNOW]	97	[GO TO PVU2]
[REFUSED]	98	[GO TO PVU2]

PVU2. Our records show that you installed &PV_NUM of these panels through the program. Is this correct?

[YES]	1	[GO TO PVU3]
[NO]	2	[GO TO PVU2a]
[DON'T KNOW]	97	[GO TO PVU3]
[REFUSED]	98	[GO TO PVU3]

PVU2a. What is the correct number of this type of PV panel that you installed through the program?

ENTER NUMBER	_____	[GO TO PVU2b]
[DON'T KNOW]	97	[GO TO PVU2b]
[REFUSED]	98	[GO TO PVU2b]

PVU2b. Why did you install a different number of this type of panel?

Have no idea why numbers differ	1	[GO TO PVU3]
Put some in storage	2	[GO TO PVU3]
Installed somewhere else	3	[GO TO PVU3]
Insufficient financial resources to complete full amount	4	[GO TO PVU3]
Other, Specify _____		[GO TO PVU3]
[DON'T KNOW]	97	[GO TO PVU3]
[REFUSED]	98	[GO TO PVU3]

PVU3. Are all of these panels still installed?

[YES]	1	[GO TO PVU1 FOR NEXT &PV_TECH]
[NO]	2	[GO TO PVU3a]
[DON'T KNOW]	97	[GO TO PVU1 FOR NEXT &PV_TECH]
[REFUSED]	98	[GO TO PVU1 FOR NEXT &PV_TECH]

PVU3a. How many of these panels have been removed?

ENTER NUMBER _____		[GO TO PVU3b]
[DON'T KNOW]	97	[GO TO PVU3b]
[REFUSED]	98	[GO TO PVU3b]

PVU3b. Why did you remove some of the panels?

SPECIFY _____		[GO TO PVU1 FOR NEXT &PV_TECH]
[DON'T KNOW]	97	[GO TO PVU1 FOR NEXT &PV_TECH]
[REFUSED]	98	[GO TO PVU1 FOR NEXT &PV_TECH]

PVU4. Are there other types of PV panels installed through the &PROGRAM?

[YES]	1	[GO TO PVU5 for next module]
[NO]	2	[GO TO PVN1]
[DON'T KNOW]	97	[GO TO PVN1]
[REFUSED]	98	[GO TO PVN1]

[IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, OR INFORMATION IS NEEDED ABOUT ADDITIONAL UNITS, ASK PVU5 THROUGH PVU7.]

Without Measure Data

Check here if these measures were: Rebated Financed or Directly installed

PVU5. What is the manufacturer and model number of your PV modules?

RECORD MANUFACTURER	_____	[GO TO PVU5a]
RECORD MODEL	_____	
[DON'T KNOW]	97	[GO TO PVU5a]
[REFUSED]	98	[GO TO PVU5a]

PVU5a. How many of that type of PV module have been installed through the &PROGRAM?

ENTER NUMBER	_____	[GO TO PVU6]
[DON'T KNOW]	97	[GO TO PVU6]
[REFUSED]	98	[GO TO PVU6]

PVU6. Are all of these panels still installed?

[YES]	1	[GO TO PVU7]
[NO]	2	[GO TO PVU6a]
[DON'T KNOW]	97	[GO TO PVU7]
[REFUSED]	98	[GO TO PVU7]

PVU6a. How many of these panels have been removed?

ENTER NUMBER	_____	[GO TO PVU6b]
[DON'T KNOW]	97	[GO TO PVU6b]
[REFUSED]	98	[GO TO PVU6b]

PVU6b. Why did you remove some of the panels?

SPECIFY	_____	[GO TO PVU7]
[DON'T KNOW]	97	[GO TO PVU7]
[REFUSED]	98	[GO TO PVU7]

[IF PVU5=97 OR 98, GO TO PVN1]

PVU7. Are there other types of PV panels installed through the &PROGRAM?

[YES]	1	[GO TO PVU5 for next module type]
[NO]	2	[GO TO PVN1]
[DON'T KNOW]	97	[GO TO PVN1]
[REFUSED]	98	[GO TO PVN1]

INSTALLATION

PVN1. When was your PV system installed?

RECORD MONTH AND YEAR (if possible get date)	_____
[DON'T KNOW]	97
[REFUSED]	98

PVN2. Have you modified the system since it was first installed?

[YES]	1	
[NO]	2	[GO TO PVN3]
[DON'T KNOW]	97	[GO TO PVN3]
[REFUSED]	98	[GO TO PVN3]

PVN2a. Was the modification an addition, an equipment replacement, or something else?

Addition	1	
Replacement	2	[GO TO PVN2c]
Addition and replacement	3	
Other, Specify	_____	[GO TO PVN2d]
[DON'T KNOW]	97	[GO TO PVN3]
[REFUSED]	98	[GO TO PVN3]

PVN2b. What have you added?

RECORD RESPONSE - note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF PVN2a=1, GO TO PVN2d]

PVN2c. What did you replace?

RECORD RESPONSE - note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

PVN2d. When did you make these changes?

RECORD MONTH AND YEAR (if possible get date)	_____
[DON'T KNOW]	97
[REFUSED]	98

PVN2e. Why did you make these changes?

SPECIFY	_____
[DON'T KNOW]	97
[REFUSED]	98

PVN3. What is the tilt angle of your panels, on average, including the angle of your roof (if any)?

ENTER TILT ANGLE	_____
[DON'T KNOW]	97
[REFUSED]	98

PVN3a. Do you adjust your panel tilt manually?

[YES]	1	
[NO]	2	[GO TO PVN4]
[DON'T KNOW]	97	[GO TO PVN4]
[REFUSED]	98	[GO TO PVN4]

PVN3b. How many times per year?

RECORD NUMBER	_____
[DON'T KNOW]	97
[REFUSED]	98

PVN4. Are your panels on an automatic tracking system?

[IF RESPONDENT IS UNFAMILIAR WITH THE TERM "Automatic Tracking", SAY "They pivot automatically throughout the day to follow the sun."]

[YES]	1	[GO TO PVN4b]
[NO]	2	
[DON'T KNOW]	97	
[REFUSED]	98	

PVN4a. How many degrees east or west from south are your panels facing?

ENTER DEGREES FROM THE SOUTH	_____	
[DON'T KNOW]	97	
[REFUSED]	98	

[IF PVN3a=1, GO TO PVN5]

PVN4b. Is your tracking system DUAL axis?

[IF RESPONDENT IS UNFAMILIAR WITH THE TERM "Dual Axis", SAY "They pivot both left and right and up and down."]

[YES]	1
[NO]	2
[DON'T KNOW]	97
[REFUSED]	98

PVN5. Are your panels shaded at all during the year?

[YES]	1	
[NO]	2	[GO TO PVN6]
[DON'T KNOW]	97	[GO TO PVN6]
[REFUSED]	98	[GO TO PVN6]

	PVN5a. Which months of the year are they shaded at least part of the day?	PVN5b. For each month that they are shaded part of the day, what times of day are they shaded, and what percent of the panels are shaded on average?	
Month		Time of Day	Percent Shaded
January	1	_____	_____
February	2	_____	_____
March	3	_____	_____
April	4	_____	_____
May	5	_____	_____
June	6	_____	_____
July	7	_____	_____
August	8	_____	_____
September	9	_____	_____
October	10	_____	_____
November	11	_____	_____
December	12	_____	_____
[DON'T KNOW]	97 [GO TO PVN6]	97	97
[REFUSED]	98 [GO TO PVN6]	98	98

PVN6. Are your panels snow covered at all during the year?

[YES]	1	
[NO]	2	[GO TO PVP1]
[DON'T KNOW]	97	[GO TO PVP1]
[REFUSED]	98	[GO TO PVP1]

Month	PVN6a. Which months of the year are they often covered at least part of the time?	PVN6b. For each month that they are snow covered what percent of the time are they covered?
January	1	_____
February	2	_____
March	3	_____
April	4	_____
May	5	_____
June	6	_____
July	7	_____
August	8	_____
September	9	_____
October	10	_____
November	11	_____
December	12	_____
[DON'T KNOW]	97 [GO TO PVP1]	97
[REFUSED]	98 [GO TO PVP1]	98

PRODUCTION

PVP1. Did your system begin producing electricity on the date it was installed?

[YES]	1	
[NO]	2	[GO TO PVP2]
[DON'T KNOW]	97	[GO TO PVP2]
[REFUSED]	98	[GO TO PVP2]

PVP1a When did it begin producing electricity?

RECORD Month and Year (if possible get day)	_____	
[DON'T KNOW]	97	[GO TO PVP2]
[REFUSED]	98	[GO TO PVP2]

PVP2. Has there been any major down-time (more than a few days) since the system was installed?

[YES]	1	
[NO]	2	[GO TO PVP3]
[DON'T KNOW]	97	[GO TO PVP3]
[REFUSED]	98	[GO TO PVP3]

PVP2a. How long was the most substantial downtime period, and when did it occur?

WHEN: RECORD Month and Year (if possible, get day)	_____
FOR HOW LONG: RECORD Months, Years, Days (if possible)	_____
[DON'T KNOW]	97
[REFUSED]	98

PVP2b. Why was the system down?

RECORD RESPONSE	_____
[DON'T KNOW]	97
[REFUSED]	98

PVP3. Please tell me your PV system total kW capacity.

RECORD kW	_____
[DON'T KNOW]	97
[REFUSED]	98

PVP4. Please tell me the total kWh production of the system since it started generating power. If you don't know exactly, your best estimate is ok.

RECORD kWh	_____
[DON'T KNOW]	97
[REFUSED]	98

PVP4a. How did you determine the total kWh production? [\[READ CHOICES, CIRCLE ALL THAT APPLY\]](#)

Read-out display on inverter?	1	
Separate utility meter for PV production?	2	[GO TO PVP5]
Computer tracking software	3	[GO TO PVP5]
Estimate	4	[GO TO PVP5]
[Other, Specify]	_____	[GO TO PVP5]
[DON'T KNOW]	97	[GO TO PVP5]
[REFUSED]	98	[GO TO PVP5]

PVP4b When was the display last reset?

RECORD RESET DATE	_____
[NOT APPLICABLE]	96
[DON'T KNOW]	97
[REFUSED]	98

PVP5. What percentage of the expected savings has your system actually produced?

RECORD %	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF PVP5 NOT EQUAL 100%]

PVP5a. Why do think the actual savings are different from the expected savings?

RECORD RESPONSE	_____
[DON'T KNOW]	97
[REFUSED]	98

RENEWABLES SUBMODULE: WIND SYSTEMS

[IF &WIND TURBINE = TRUE]

In this section we'll be discussing the wind power project that received support from &SPONSOR &PROGRAM.

UNITS

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE, ASK QUESTIONS WU1 THROUGH WU4]

With Measure Data

Check here if these measures were: Rebated Financed or Directly installed

WU1. Our records indicate that you installed &W_TECH Wind turbines through the &PROGRAM. Is this correct?

[YES]	1	[GO TO WU2]
[NO]	2	[GO TO WU1a]
[DON'T KNOW]	97	[GO TO WU2]
[REFUSED]	98	[GO TO WU2]

WU1a. What is the manufacturer and model number of your Wind turbines?

RECORD MANUFACTURER RECORD MODEL	_____	[GO TO WU2]
[DON'T KNOW]	97	[GO TO WU2]
[REFUSED]	98	[GO TO WU2]

WU2. Our records show that you installed &W_NUM of these turbines through the program. Is this correct?

[YES]	1	[GO TO WU3]
[NO]	2	[GO TO WU3a]
[DON'T KNOW]	97	[GO TO PW3]
[REFUSED]	98	[GO TO PW3]

WU2a. What is the correct number of this type of wind turbine that you installed through the program?

ENTER NUMBER	_____	[GO TO WU2b]
[DON'T KNOW]	97	[GO TO WU2b]
[REFUSED]	98	[GO TO WU2b]

WU2b. Why did you install a different number of this type of panel?

Have no idea why numbers differ	1	[GO TO WU3]
Put some in storage	2	[GO TO WU3]
Installed somewhere else	3	[GO TO WU3]
Insufficient financial resources to complete full amount	4	[GO TO WU3]
Other, Specify	_____	[GO TO WU3]
[DON'T KNOW]	97	[GO TO WU3]
[REFUSED]	98	[GO TO WU3]

WU3. Are all of these turbines still installed?

[YES]	1	[GO TO WU1 FOR NEXT &W_TECH]
[NO]	2	[GO TO WU3a]
[DON'T KNOW]	97	[GO TO WU1 FOR NEXT &W_TECH]
[REFUSED]	98	[GO TO WU1 FOR NEXT &W_TECH]

WU3a. How many of these turbines have been removed?

ENTER NUMBER	_____	[GO TO WU3b]
[DON'T KNOW]	97	[GO TO WU3b]
[REFUSED]	98	[GO TO WU3b]

WU3b. Why did you remove some of the turbines?

SPECIFY	_____	[GO TO WU1 FOR NEXT &W_TECH]
[DON'T KNOW]	97	[GO TO WU1 FOR NEXT &W_TECH]
[REFUSED]	98	[GO TO WU1 FOR NEXT &W_TECH]

WU4. Are there other types of wind turbines installed through the &PROGRAM?

[YES]	1	[GO TO WU5 for next turbine type]
[NO]	2	[GO TO WN1]
[DON'T KNOW]	97	[GO TO WN1]
[REFUSED]	98	[GO TO WN1]

[IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, OR INFORMATION IS NEEDED ABOUT ADDITIONAL UNITS, ASK WU5 THROUGH WU7]

Without Measure Data

Check here if these measures were: Rebated Financed or Directly installed

WU5. What is the manufacturer and model number of your wind turbine?

RECORD MANUFACTURER RECORD MODEL	_____	[GO TO WU5a]
[DON'T KNOW]	97	[GO TO WU5a]
[REFUSED]	98	[GO TO WU5a]

WU5a. How many of that type of wind turbine have been installed through the &PROGRAM?

ENTER NUMBER	_____	[GO TO WU5b]
[DON'T KNOW]	97	[GO TO WU5b]
[REFUSED]	98	[GO TO WU5b]

WU5b. What is/are the (average) hub height(s) of this/these turbine(s)? [Height at the top of the tower, where the blades connect to the tower]

RECORD HEIGHT	_____ feet/meters
[DON'T KNOW]	97
[REFUSED]	98

WU5c.What is the manufacturer's rated capacity of the turbine?

RECORD CAPACITY	_____ kW
[DON'T KNOW]	97
[REFUSED]	98

WU5d.What is the rotor diameter (diameter of the blades)? [in feet, inches, or meters]

RECORD DIAMETER AND UNITS	_____
[DON'T KNOW]	97
[REFUSED]	98

WU6. Are all of these turbines still installed?

[YES]	1	[GO TO WU7]
[NO]	2	[GO TO WU6a]
[DON'T KNOW]	97	[GO TO WU7]
[REFUSED]	98	[GO TO WU7]

WU6a. How many of these turbines have been removed?

ENTER NUMBER	_____	[GO TO WU6b]
[DON'T KNOW]	97	[GO TO WU6b]
[REFUSED]	98	[GO TO WU6b]

WU6b. Why did you remove some of the turbines?

SPECIFY	_____	[GO TO WU7]
[DON'T KNOW]	97	[GO TO WU7]
[REFUSED]	98	[GO TO WU7]

[IF WU5=-97 OR -98, GO TO WN1]

WU7. Are there other types of Wind turbines installed through the &PROGRAM?

[YES]	1	[GO TO WU5 for next turbine type]
[NO]	2	[GO TO WN1]
[DON'T KNOW]	97	[GO TO WN1]
[REFUSED]	98	[GO TO WN1]

INSTALLATION

WN1. When was your wind power system installed?

RECORD Month and Year (if possible get day)	
[DON'T KNOW]	97
[REFUSED]	98

WN2. Have you modified the system since it was first installed?

[YES]	1	
[NO]	2	[GO TO WN3]
[DON'T KNOW]	97	[GO TO WN3]
[REFUSED]	98	[GO TO WN3]

WN2a. Was the modification an addition, an equipment replacement, or something else?

Addition	1	
Replacement	2	[GO TO WN2c]
Addition and replacement	3	
Other, Specify	_____	[GO TO WN2d]
[DON'T KNOW]	97	[GO TO WN3]
[REFUSED]	98	[GO TO WN3]

WN2b. What have you added?

RECORD RESPONSE - note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF WN2a=1, GO TO WN2d.]

WN2c. What did you replace?

RECORD RESPONSE - note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

WN2d. When did you make these changes?

RECORD Month and Year (if possible get day)	
[DON'T KNOW]	97
[REFUSED]	98

WN2e. Why did you make these changes?

SPECIFY	_____
[DON'T KNOW]	97
[REFUSED]	98

WN3. From what direction is the prevailing wind?

North	1	
North-East	2	
East	3	
South-East	4	
South	5	
South-West	6	
West	7	
North-West	8	
[DON'T KNOW]	97	[GO TO WN3b]
[REFUSED]	98	[GO TO WN3b]

WN3a.

	WN3a. What are the nearest tall obstructions (e.g. trees, buildings, etc...) to your wind turbines in the direction of the prevailing wind?			WN3a1. How tall is this obstruction? (in feet or yards - indicate units)			WN3a2. How far is this obstruction from the turbine? (in feet or yards - indicate units)		
Obstruction #1		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.
Obstruction #2		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.
Obstruction #3		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.
Obstruction #4		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.

[IF WN3 NOT EQUAL 97 OR 98, GO TO WP1]

WN3b.

	WN3b. What are the nearest tall obstructions (e.g. trees, buildings, etc.) to your wind turbines?			WN3b1. How tall is this obstruction? (in feet or yards - indicate units)			WN3b2. How far is this obstruction from the turbine? (in feet or yards - indicate units)			WN3b3. What direction is this obstruction from the turbine? (e.g. north, south-west, etc.)		
Obstruction #1		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.
Obstruction #2		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.
Obstruction #3		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.
Obstruction #4		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.		97 DK	98 Ref.

PRODUCTION

WP1. Did the turbine begin producing electricity on the date it was installed?

[YES]	1	[GO TO WP2]
[NO]	2	
[DON'T KNOW]	97	[GO TO WP2]
[REFUSED]	98	[GO TO WP2]

WP1a. When did it begin producing electricity?

RECORD Month and Year (if possible get day)	
[DON'T KNOW]	97
[REFUSED]	98

WP2. Has there been any major down-time (more than a few days) with the system since installation, other than times when the wind wasn't blowing strongly enough to generate power?

YES	1	
NO	2	[GO TO WP3]
[DON'T KNOW]	97	[GO TO WP3]
[REFUSED]	98	[GO TO WP3]

WP2a. How long was the most substantial downtime period, and when did it occur?

WHEN: RECORD Month and Year (if possible get day)		
FOR HOW LONG: RECORD Months, Years, Days (if possible)		
[DON'T KNOW]	97	[GO TO WP3]
[REFUSED]	98	[GO TO WP3]

WP2b. Why was the system down?

RECORD RESPONSE		
[DON'T KNOW]	97	
[REFUSED]	98	

WP3. Please tell me the total kWh production of the system since it started generating power. If you don't know exactly, your best estimate is ok.

kWh	_____
[DON'T KNOW]	97
[REFUSED]	98

WP3a. How did you determine the total kWh production? [\[READ CHOICES, CIRCLE ALL THAT APPLY\]](#)

Read-out display on generator	1	
Separate utility meter for biogas production	2	[GO TO WP4]
Computer tracking software	3	[GO TO WP4]
Estimate	4	[GO TO WP4]
Other, Specify	_____	[GO TO WP4]
[DON'T KNOW]	97	[GO TO WP4]
[REFUSED]	98	[GO TO WP4]

WP3b. When was the display last reset?

RECORD RESET DATE	
[DON'T KNOW]	97
[REFUSED]	98

WP4. What was the manufacturer's estimated production for the system, in kWh?

RECORD NUMBER in kWh	_____
[DON'T KNOW]	97
[REFUSED]	98

WP5. What percentage of the expected savings has your system actually produced?

[RECORD RESPONSE] _____

WP5a. [IF WP5 NOT EQUAL 100%]

Why do you think the actual savings are different from the expected savings?

[RECORD RESPONSE] _____

RENEWABLES SUBMODULE: SOLAR WATER HEATING

[IF &SOLAR WATER HEATING = TRUE]

In this section we'll be discussing the solar water heater project that received support from &SPONSOR &PROGRAM.

UNITS

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE, ASK QUESTIONS SWU1 THROUGH SWU4]

With Measure Data

Check here if these measures were: Rebated Financed or Directly installed

SWU1. Our records indicate that you installed &SW_TECH solar water heater modules through the &PROGRAM. Is this correct?

[YES]	1	[GO TO SWU2]
[NO]	2	[GO TO SWU1a]
[DON'T KNOW]	97	[GO TO SWU2]
[REFUSED]	98	[GO TO SWU2]

SWU1a. What is the manufacturer and model number of your solar water heater modules?

RECORD MANUFACTURER RECORD MODEL	_____ _____	[GO TO SWU2]
[DON'T KNOW]	97	[GO TO SWU2]
[REFUSED]	98	[GO TO SWU2]

SWU2. Our records show that you installed &SW_NUM of these modules through the program. Is this correct?

[YES]	1	[GO TO SWU3]
[NO]	2	[GO TO SWU2a]
[DON'T KNOW]	97	[GO TO SWU3]
[REFUSED]	98	[GO TO SWU3]

SWU2a. What is the correct number of this type of solar water heating module that you installed through the program?

ENTER NUMBER	_____	[GO TO SWU2b]
[DON'T KNOW]	97	[GO TO SWU2b]
[REFUSED]	98	[GO TO SWU2b]

SWU2b. Why did you install a different number of this type of module?

Have no idea why numbers differ	1	[GO TO SWU3]
Put some in storage	2	[GO TO SWU3]
Installed somewhere else	3	[GO TO SWU3]
Insufficient financial resources to complete full amount	4	[GO TO SWU3]
Other, Specify	_____	[GO TO SWU3]
[DON'T KNOW]	97	[GO TO SWU3]
[REFUSED]	98	[GO TO SWU3]

SWU3. Are all of these modules still installed?

[YES]	1	[GO TO SWU1 FOR NEXT &SW_TECH]
[NO]	2	[GO TO SWU3a]
[DON'T KNOW]	97	[GO TO SWU1 FOR NEXT &SW_TECH]
[REFUSED]	98	[GO TO SWU1 FOR NEXT &SW_TECH]

SWU3a. How many of these modules have been removed?

ENTER NUMBER	_____	[GO TO SWU3b]
[DON'T KNOW]	97	[GO TO SWU3b]
[REFUSED]	98	[GO TO SWU3b]

SWU3b. Why did you remove some of the modules?

SPECIFY	_____	[GO TO SWU1 FOR NEXT &SW_TECH]
[DON'T KNOW]	97	[GO TO SWU1 FOR NEXT &SW_TECH]
[REFUSED]	98	[GO TO SWU1 FOR NEXT &SW_TECH]

SWU4. Are there other types of solar water heater modules installed through the &PROGRAM?

[YES]	1	[GO TO SWU5 for next module]
[NO]	2	[GO TO SWU8]
[DON'T KNOW]	97	[GO TO SWU8]
[REFUSED]	98	[GO TO SWU8]

[IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, OR INFORMATION IS NEEDED ABOUT ADDITIONAL UNITS, ASK SWU5 THROUGH SWU7]

Without Measure Data

Check here if these measures were: Rebated Financed or Directly installed

SWU5. What is the manufacturer and model number of your solar water heating modules?

RECORD MANUFACTURER	_____	[GO TO SWU5a]
RECORD MODEL	_____	
[DON'T KNOW]	97	[GO TO SWU5a]
[REFUSED]	98	[GO TO SWU5a]

SWU5a. How many of that type of module have been installed through the &PROGRAM?

ENTER NUMBER	_____	[GO TO SWU6]
[DON'T KNOW]	97	[GO TO SWU6]
[REFUSED]	98	[GO TO SWU6]

SWU6. Are all of these modules still installed?

[YES]	1	[GO TO SWU7]
[NO]	2	[GO TO SWU6a]
[DON'T KNOW]	97	[GO TO SWU7]
[REFUSED]	98	[GO TO SWU7]

SWU6a. How many of these modules have been removed?

ENTER NUMBER	_____	[GO TO SWU6b]
[DON'T KNOW]	97	[GO TO SWU6b]
[REFUSED]	98	[GO TO SWU6b]

SWU6b. Why did you remove some of the modules?

SPECIFY	_____	[GO TO SWU7]
[DON'T KNOW]	97	[GO TO SWU7]
[REFUSED]	98	[GO TO SWU7]

[IF SWU5=-97 OR -98, GO TO SWU8]

SWU7. Are there other types of solar water heater modules installed through the &PROGRAM?

[YES]	1	[GO TO SWU7 for next module type]
[NO]	2	[GO TO SWU8]
[DON'T KNOW]	97	[GO TO SWU8]
[REFUSED]	98	[GO TO SWU8]

In Either Case

SWU8. What type of solar water heating modules were installed through the &PROGRAM? [READ LIST]

Unglazed	1	[GO TO SWU9]
Glazed	2	[GO TO SWU9]
Evacuated tube	3	[GO TO SWU9]
Other, Specify	_____	[GO TO SWU9]
[DON'T KNOW]	97	[GO TO SWU9]
[REFUSED]	98	[GO TO SWU9]

SWU9. What is the total square footage surface area of modules funded through &PROGRAM?

RECORD SQUARE FOOTAGE	_____	[GO TO SWA1]
[DON'T KNOW]	97	[GO TO SWA1]
[REFUSED]	98	[GO TO SWA1]

ACCESSORIES

SWA1. Most solar hot water systems have a pump that circulates water within the modules. What is the manufacturer of your system's pump?

ENTER MANUFACTURER	_____	
No Pump	96	[GO TO SWA3]
[DON'T KNOW]	97	[GO TO SWA1b]
[REFUSED]	98	[GO TO SWA1b]

SWA1a. What is the model number?

ENTER MODEL NUMBER	_____	[GO TO SWA2]
[DON'T KNOW]	97	
[REFUSED]	98	

SWA1b. What is the motor horsepower?

ENTER HORSEPOWER	_____
[DON'T KNOW]	97
[REFUSED]	98

SWA2. How is your pump powered? Did you install a small solar electric panel to power the pump? Or does the pump run off your regular electricity, or something else?

Small solar electric panel	1
Regular electricity	2
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

SWA3. How many tanks are heated using the system funded through &PROGRAM?

NUMBER OF TANKS	_____	
[DON'T KNOW]	97	[GO TO SWN1]
[REFUSED]	98	[GO TO SWN1]

SWA4. What is the capacity of each of these tanks?

SWA4a. [CAPACITY#1]	
[DON'T KNOW]	97
[REFUSED]	98
SWA4b. [CAPACITY#2]	
[DON'T KNOW]	97
[REFUSED]	98
SWA4c. [CAPACITY#3]	
[DON'T KNOW]	97
[REFUSED]	98

INSTALLATION

SWN1. When was your solar water heating system installed?

RECORD Month and Year (if possible get day)	
[DON'T KNOW]	97
[REFUSED]	98

SWN2. Have you modified the system since it was first installed?

[YES]	1	
[NO]	2	[GO TO SWN3]
[DON'T KNOW]	97	[GO TO SWN3]
[REFUSED]	98	[GO TO SWN3]

SWN2a. Was the modification an addition, an equipment replacement, or something else?

Addition	1	
Replacement	2	[GO TO SWN2c]
Addition and replacement	3	
Other, Specify	_____	[GO TO SWN2d]
	-	
[DON'T KNOW]	97	[GO TO SWN3]
[REFUSED]	98	[GO TO SWN3]

SWN2b. What have you added?

RECORD RESPONSE – note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF SWN2a=1, GO TO SWN2d.]

SWN2c. What did you replace?

RECORD RESPONSE – note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

SWN2d. When did you make these changes?

RECORD Month and Year (if possible get day)	_____
[DON'T KNOW]	97
[REFUSED]	98

SWN2e. Why did you make these changes?

SPECIFY	_____
[DON'T KNOW]	97
[REFUSED]	98

SWN3. What is your solar water heating system used for? [READ LIST, CIRCLE ALL THAT APPLY]

Domestic Hot Water	1	[GO TO SWN4]
Space Heating	2	[GO TO SWN4]
Pool Heating	3	[GO TO SWN3a]
Other, Specify	_____	[GO TO SWN4]
	-	
[DON'T KNOW]	97	[GO TO SWN4]
[REFUSED]	98	[GO TO SWN4]

SWN3a. What is the size [ASK SWN3a FOR EACH &N_POOL]

[CAPACITY – enter gallons]	_____	[GO TO SWN3b]
[or SIZE – feet by depth]	_____	[GO TO SWN3b]
[DON'T KNOW]	97	[GO TO SWN4]
[REFUSED]	98	[GO TO SWN4]

SWN3b. Is this pool...

Indoor	1
Outdoor above ground	2
Outdoor in ground	3
[DON'T KNOW]	97
[REFUSED]	98

SWN4. How many degrees east or west from south do your modules face?

ENTER CORRECT DEGREES FROM SOUTH	_____
[DON'T KNOW]	97
[REFUSED]	98

SWN5. What is the tilt angle of your modules, on average, including the angle of your roof (if any)?

ENTER CORRECT TILT ANGLE	
[DON'T KNOW]	97
[REFUSED]	98

SWN6. Are your modules shaded at all during the year?

[YES]	1	
[NO]	2	[GO TO SWN7]
[DON'T KNOW]	97	[GO TO SWN7]
[REFUSED]	98	[GO TO SWN7]

	SWN6a. Which months of the year are they shaded at least part of the day?	SWN6b. For each month that they are shaded part of the day, what times of day are they shaded, and what percent of the panels are shaded on average?	
Month		Time of Day	Percent Shaded
January	1	_____	_____
February	2	_____	_____
March	3	_____	_____
April	4	_____	_____
May	5	_____	_____
June	6	_____	_____
July	7	_____	_____
August	8	_____	_____
September	9	_____	_____
October	10	_____	_____
November	11	_____	_____
December	12	_____	_____
[DON'T KNOW]	97 [GO TO SWN7]	97	97
[REFUSED]	98 [GO TO SWN7]	98	98

SWN7. Are your modules snow covered at all during the year?

[YES]	1	
[NO]	2	[GO TO SWP1]
[DON'T KNOW]	97	[GO TO SWP1]
[REFUSED]	98	[GO TO SWP1]

Month	SWN7a. Which months of the year are they often covered at least part of the time?	SWN7b. For each month that they are snow covered what percent of the time are they covered?
January	1	_____
February	2	_____
March	3	_____
April	4	_____
May	5	_____
June	6	_____
July	7	_____
August	8	_____
September	9	_____
October	10	_____
November	11	_____
December	12	_____
[DON'T KNOW]	97 [GO TO SWP1]	97
[REFUSED]	98 [GO TO SWP1]	98

PRODUCTION

SWP1. Is your solar water heating system used year-round?

[YES]	1	[GO TO SWP2]
[NO]	2	
[DON'T KNOW]	97	[GO TO SWP2]
[REFUSED]	98	[GO TO SWP2]

SWP1a. In what months is it used?

Month	
January	1
February	2
March	3
April	4
May	5
June	6
July	7
August	8
September	9
October	10
November	11
December	12
[DON'T KNOW]	97
[REFUSED]	98

SWP2. Has there been any major down-time (more than a few days) with the system since installation?

[YES]	1	
[NO]	2	[GO TO SWP2a]
[DON'T KNOW]	97	[GO TO SWP2a]
[REFUSED]	98	[GO TO SWP2a]

SWP2a. How long was the most substantial downtime period, and when did it occur?

WHEN: RECORD Month and Year (if possible get day)	_____
FOR HOW LONG: RECORD Months, Years, Days (if possible)	_____
[DON'T KNOW]	97
[REFUSED]	98

SWP2b. Why was the system down?

RECORD RESPONSE	
[DON'T KNOW]	97
[REFUSED]	98

[IF SWN3 NOT EQUAL "Domestic Hot Water" GO TO SWP5]

SWP3. About how much hot water do you use per month?

ENTER HOT WATER USAGE IN GALLONS	_____	
	-	
[DON'T KNOW]	97	[GO TO SWP4]
[REFUSED]	98	[GO TO SWP4]

SWP3a. What is this estimate based on?

RECORD RESPONSE	_____	[GO TO SWP5]
	-	
[DON'T KNOW]	97	
[REFUSED]	98	

SWP3b. [Non-Residential] What type of facility is this?

Laundry	1	[GO TO SWP4]
Restaurant	2	[GO TO SWP4]
Hospital	3	[GO TO SWP4]
Nursing Home	4	[GO TO SW3c]
Dormitory	5	[GO TO SW3c]
Other, Specify	_____	[GO TO SWP4]
[DON'T KNOW]	97	
[REFUSED]	98	

SWP3c. How many residents live at the facility ?

[RECORD RESPONSE] _____

SWP4. At what time of day does most of your water usage occur?

Before 6 AM	1
Between 6 AM and noon	2
Between noon and 6 PM	3
Between 6 PM and 10 PM	4
After 10 PM	5
Other	_____
[DON'T KNOW]	97
[REFUSED]	98

SWP5. What temperature, in degrees Fahrenheit, does the water in the tank(s) reach on a sunny day in winter?

ENTER TEMPERATURE	_____
[DON'T KNOW]	97
[REFUSED]	98

SWP6. What temperature, in degrees Fahrenheit, does the water in the tank(s) reach on a sunny day in summer?

ENTER TEMPERATURE	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF SWN3 NOT EQUAL "Domestic Hot Water" GO TO SWP9]

SWP7. What is your supplemental source for water heating? **[CIRCLE ALL THAT APPLY]**

Natural Gas Tankless Water Heater	1
Natural Gas Tank Style Water Heater	2
Natural Gas Boiler	3
Propane Fired Water Heater or Boiler	4
Oil Fired Water Heater or Boiler	5
Electric Tankless Water Heater	6
Electric Tank Style Water Heater	7
Electric Heat Pump Water Heater	8
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

SWP8. Did the solar water heater replace an existing water heater?

[YES]	1	
[NO]	2	[GO TO SWP9]
[DON'T KNOW]	97	[GO TO SWP9]
[REFUSED]	98	[GO TO SWP9]

SWP8a. What was your previous source for water heating? **[CIRCLE ALL THAT APPLY]**

Natural Gas Tankless Water Heater	1
Natural Gas Tank Style Water Heater	2
Natural Gas Boiler	3
Propane Fired Water Heater or Boiler	4
Oil Fired Water Heater or Boiler	5
Electric Tankless Water Heater	6
Electric Tank Style Water Heater	7
Electric Heat Pump Water Heater	8
Other, Specify _____	
[DON'T KNOW]	97
[REFUSED]	98

SWP9. What percentage of the expected savings has your system actually produced?

[IF SWP9 NOT EQUAL 100%]

SWP9a. Why do think the actual savings are different from the expected savings?

[RECORD RESPONSE] _____

RENEWABLES SUBMODULE: BIOMASS

[IF &BIOMASS = TRUE]

In the next section we'll be discussing the biomass project that received support from &SPONSOR &PROGRAM.

I am going to discuss some technical information about the system in order to confirm our information regarding your biomass system. The paperwork from the original site survey, design study, or installation may help you answer these questions.

UNITS

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE, ASK QUESTIONS BMU1 THROUGH BMU4]

With Measure Data

Check here if these measures were: [] Rebated [] Financed or [] Directly installed

BMU1. Our records indicate that you installed &BM_TECH biomass units through the &PROGRAM. Is this correct?

[YES]	1	[GO TO BMU2]
[NO]	2	[GO TO BMU1a]
[DON'T KNOW]	97	[GO TO BMU1a]
[REFUSED]	98	[GO TO BMU1a]

BMU1a. What is the manufacturer and model number of your biomass units?

RECORD MANUFACTURER RECORD MODEL	_____	[GO TO BMU2]
[DON'T KNOW]	97	[GO TO BMU2]
[REFUSED]	98	[GO TO BMU2]

BMU2. Our records show that you installed &BM_NUM of these units through the program. Is this correct?

[YES]	1	[GO TO BMU3]
[NO]	2	[GO TO BMU2a]
[DON'T KNOW]	97	[GO TO BMU3]
[REFUSED]	98	[GO TO BMU3]

BMU2a. What is the correct number of this type of biomass unit that you installed through the program?

ENTER NUMBER	_____	[GO TO BMU2b]
[DON'T KNOW]	97	[GO TO BMU2b]
[REFUSED]	98	[GO TO BMU2b]

BMU2b. Why did you install a different number of this type of unit?

Have no idea why numbers differ	1	[GO TO BMU3]
Put some in storage	2	[GO TO BMU3]
Installed somewhere else	3	[GO TO BMU3]
Insufficient financial resources to complete full amount	4	[GO TO BMU3]
Other, Specify	_____	[GO TO BMU3]
[DON'T KNOW]	97	[GO TO BMU3]
[REFUSED]	98	[GO TO BMU3]

BMU3. Are all of these units still installed?

[YES]	1	[GO TO BMU1 FOR NEXT &BM_Tech]
[NO]	2	[GO TO BMU3a]
[DON'T KNOW]	97	[GO TO BMU1 FOR NEXT &BM_Tech]
[REFUSED]	98	[GO TO BMU1 FOR NEXT &BM_Tech]

MU3a. How many of these units have been removed?

ENTER NUMBER	_____	[GO TO BMU3b]
[DON'T KNOW]	97	[GO TO BMU3b]
[REFUSED]	98	[GO TO BMU3b]

BMU3b. Why did you remove some of the units?

SPECIFY	_____	[GO TO BMU1 FOR NEXT &BM_Tech]
[DON'T KNOW]	97	[GO TO BMU1 FOR NEXT &BM_Tech]
[REFUSED]	98	[GO TO BMU1 FOR NEXT &BM_Tech]

BMU4. Are there other types of biomass units installed through the &PROGRAM?

[YES]	1	[GO TO BMU5 for next unit type]
[NO]	2	[GO TO BMU8]
[DON'T KNOW]	97	[GO TO BMU8]
[REFUSED]	98	[GO TO BMU8]

[IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, OR INFORMATION IS NEEDED ABOUT ADDITIONAL UNITS, ASK BMU5 THROUGH BMU7]

Without Measure Data

Check here if these measures were: Rebated Financed or Directly installed

BMU5. What is the manufacturer and model number of your biomass units?

RECORD MANUFACTURER RECORD MODEL	_____	[GO TO BMU5a]
[DON'T KNOW]	97	[GO TO BMU5a]
[REFUSED]	98	[GO TO BMU5a]

BMU5a. How many of that type of unit have been installed through the &PROGRAM?

ENTER NUMBER	_____	[GO TO BMU6]
[DON'T KNOW]	97	[GO TO BMU6]
[REFUSED]	98	[GO TO BMU6]

BMU6. Are all of these units still installed?

[YES]	1	[GO TO BMU7]
[NO]	2	[GO TO BMU6a]
[DON'T KNOW]	97	[GO TO BMU7]
[REFUSED]	98	[GO TO BMU7]

BMU6a. How many of these units have been removed?

ENTER NUMBER	_____	[GO TO BMU6b]
	-	
[DON'T KNOW]	97	[GO TO BMU6b]
[REFUSED]	98	[GO TO BMU6b]

BMU6b. Why did you remove some of the units?

SPECIFY	_____	[GO TO BMU7]
	-	
[DON'T KNOW]	97	[GO TO BMU7]
[REFUSED]	98	[GO TO BMU7]

[IF BMU5=-97 OR -98, GO TO BMU8.]

BMU7. Are there other types of biomass units installed through the &PROGRAM?

[YES]	1	[GO TO BMU5 for next unit type]
[NO]	2	[GO TO BMU8]
[DON'T KNOW]	97	[GO TO BMU8]
[REFUSED]	98	[GO TO BMU8]

In Either Case

BMU8. How would you describe the biomass system you use? Is it a: **[CIRCLE ALL THAT APPLY]**

Pellet stove, furnace, or boiler	1
Wood chip furnace or boiler	2
Log wood furnace or boiler	3
Biomass furnace or boiler	4
Wood stove	5
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

BMU9. What is the total heating capacity of biomass units funded through &PROGRAM?

RECORD HEATING CAPACTIY, IN BTU	_____
[DON'T KNOW]	97
[REFUSED]	98

INSTALLATION

BMN1. When was your biomass system installed?

RECORD Month and Year (if possible get day)	_____
[DON'T KNOW]	97
[REFUSED]	98

BMN2. How do you use the energy from the biomass system? **[CIRCLE ALL THAT APPLY]**

Space Heating	1
Water Heating	2
Industrial Process Heating	3
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

BMN3. Is this biomass system installed indoors, in space that is heated in winter?

[YES]	1
[NO]	2
Other, Specify	_____
[DON'T KNOW]	97

[REFUSED]	98
-----------	----

BMN4. Have you modified the system since it was first installed?

[YES]	1	
[NO]	2	[GO TO BMF1]
[DON'T KNOW]	97	[GO TO BMF1]
[REFUSED]	98	[GO TO BMF1]

BMN4a. Was the modification an addition, an equipment replacement, or something else?

Addition	1	
Replacement	2	[GO TO BMN4c]
Addition and replacement	3	
Other, Specify	_____	[GO TO BMN4d]
[DON'T KNOW]	97	[GO TO BMF1]
[REFUSED]	98	[GO TO BMF1]

BMN4b. What have you added?

RECORD RESPONSE - note changes to capacity	
[DON'T KNOW]	97
[REFUSED]	98

[IF BMN4a=1, GO TO BMN4d.]

BMN4c. What did you replace?

RECORD RESPONSE - note changes to capacity	
[DON'T KNOW]	97
[REFUSED]	98

BMN4d. When did you make these changes?

RECORD Month and Year (if possible get day)	
[DON'T KNOW]	97
[REFUSED]	98

BMN4e. Why did you make these changes?

SPECIFY	
[DON'T KNOW]	97
[REFUSED]	98

FUELS

BMF1. What is your primary source of fuel? [\[CIRCLE ALL THAT APPLY\]](#)

Wood logs	1	
Wood chips	2	
Biomass pellets [specify type]	_____	[GO TO BMF2]
Corn	4	[GO TO BMF2]
Other, Specify	_____	[GO TO BMF2]
[DON'T KNOW]	97	[GO TO BMF2]
[REFUSED]	98	[GO TO BMF2]

BMF1a. For the wood, do you primarily burn hardwoods or softwoods?

Primarily (over 75%) Hardwood (oak, maple)	1
Primarily (over 75%) Softwood (pines; alders)	2
Mix of both	3
[DON'T KNOW]	97
[REFUSED]	98

BMF1b. How long is this wood allowed to dry before burning?

Less than 6 months	1
6-12 months	2
greater than 12 months	3
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

BMF2. What percent of your fuel would you estimate that you get from the following sources?

Byproducts from another on-site process: [ENTER PERCENT]	_____	
Harvested on-site: [ENTER PERCENT]	_____	
Purchased from vendor: [ENTER PERCENT]	_____	
Other, Specify	_____	
[DON'T KNOW]	97	[GO TO BMF5]
[REFUSED]	98	[GO TO BMF5]

[\[IF SUM OF RESPONSES TO BGF2 <100%, PROMPT SAYING "These responses add to <Sum of BGF2 Responses>. Would you to adjust the categories, or is there another source not mentioned?"\]](#)

[IF BMF4: “Purchased from Vendor” > 30%, ASK BMF3, ELSE GO TO BMF4]

Purchased Fuel

BMF3. Who is the [supplier or manufacturer] of the fuel you purchase?

[Supplier 1] _____

[Supplier 2] _____

[IF SUM OF BMF4: “Harvested on Site” AND “Byproducts ...” IS GREATER THAN 30%, ASK BMF4 THROUGH BMF4d, ELSE GO TO BMF5]

On-Site Produced Fuel

BMF4. Do you mechanically dry your on-site produced fuel before using it?

[YES]	1	
[NO]	2	[GO TO BMF5]
[DON'T KNOW]	97	[GO TO BMF5]
[REFUSED]	98	[GO TO BMF5]

BMF4a. What type of system do you use to dry your fuel? [\[READ CHOICES\]](#)

Fan Only	1	[GO TO BMF4d]
Fuel-fired drying system	2	
Other, Specify	3	[GO TO BMF5]
[DON'T KNOW]	97	[GO TO BMF5]
[REFUSED]	98	[GO TO BMF5]

BMF4b. What type of fuel do you use for the fuel drying system.

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO BMP4d]
Propane	4	[GO TO BMP4d]
Nothing	5	[GO TO BMP4d]
Other, Specify	_____	[GO TO BMP4d]
[DON'T KNOW]	97	[GO TO BMP4d]
[REFUSED]	98	[GO TO BMP4d]

BMF4c. How much fuel do you burn per month in your drying system?

RECORD RESPONSE - [UNITS]	_____
[DON'T KNOW]	97
[REFUSED]	98

BMF4d. What is the total horsepower of your drying system fans?

RECORD RESPONSE - [HORSEPOWER]	_____
[DON'T KNOW]	97
[REFUSED]	98

BMF4e. How many hours per year would you say these fans run?

RECORD RESPONSE - [HOURS]	_____
[DON'T KNOW]	97
[REFUSED]	98

BMF5. What is the average moisture content of the fuel when burned?

RECORD MOISTURE CONTENT	_____
[DON'T KNOW]	97
[REFUSED]	98

ACCESSORIES

BMA1. Are there any electrical or mechanical devices that assist in feeding fuel to your system?

[YES]	1	[GO TO BMA1b]
[NO]	2	
[DON'T KNOW]	97	
[REFUSED]	98	

BMA1a How do you feed the fuel into the biomass system?[Probe: conveyor, chute, shovels]

RECORD RESPONSE		[GO TO BMA2]
[DON'T KNOW]	97	[GO TO BMA2]
[REFUSED]	98	[GO TO BMA2]

BMA1b. What is the total horsepower of motors used to feed fuel to your biomass system?

RECORD RESPONSE - [HORSEPOWER]	_____
[DON'T KNOW]	97
[REFUSED]	98

BMA1c. How are they controlled?

RECORD RESPONSE[IF NOT MENTIONED, PROMPT: ARE THE MOTOR(S) ON VFD(S)?]	_____
[DON'T KNOW]	97
[REFUSED]	98

BMA2. Does your biomass system require mechanical air circulation to operate?

[YES]	1	
[NO]	2	[GO TO BMA3]
[DON'T KNOW]	97	[GO TO BMA3]
[REFUSED]	98	[GO TO BMA3]

BMA2a. What is the total horsepower of motors used to circulate air?

RECORD RESPONSE - [HORSEPOWER]	_____
[DON'T KNOW]	97
[REFUSED]	98

BMA2b. How are they controlled?

RECORD RESPONSE[IF NOT MENTIONED, PROMPT: ARE THE MOTOR(S) ON VFD(S)?]	_____
[DON'T KNOW]	97
[REFUSED]	98

BMA3. Does your biomass system require mechanical water circulation to operate?

[YES]	1	
[NO]	2	[GO TO BMP1]
[DON'T KNOW]	97	[GO TO BMP1]
[REFUSED]	98	[GO TO BMP1]

BMA3a. What is the total horsepower of the pumps used to circulate water?

RECORD RESPONSE - [HORSEPOWER]	_____
	-
[DON'T KNOW]	97
[REFUSED]	98

BMA3b. How are they controlled?

RECORD RESPONSE[IF NOT MENTIONED, PROMPT: ARE THE MOTOR(S) ON VFD(S)?]	_____
	-
[DON'T KNOW]	97
[REFUSED]	98

PRODUCTION

BMP1. During which months of the year is this biomass system used?

RECORD RESPONSE	_____
[DON'T KNOW]	97
[REFUSED]	98

BMP2. Did your system begin operating on the date it was installed?

[YES]	1	[GO TO BMP3]
[NO]	2	
[DON'T KNOW]	97	[GO TO BMP3]
[REFUSED]	98	[GO TO BMP3]

BMP2a When did it begin operating?

RECORD Month and Year (if possible get day)	_____
[DON'T KNOW]	97
[REFUSED]	98

BMP3. Has there been any major down-time (more than a few days) with the system since installation?

[YES]	1	
[NO]	2	[GO TO BMP4]
[DON'T KNOW]	97	[GO TO BMP4]
[REFUSED]	98	[GO TO BMP4]

BMP3a. How long was the most substantial downtime period, and when did it occur?

WHEN: RECORD Month and Year (if possible get day)	_____
FOR HOW LONG: RECORD Months, Years, Days (if possible)	_____
[DON'T KNOW]	97
[REFUSED]	98

BMP3b. Why was the system down?

RECORD RESPONSE	_____
[DON'T KNOW]	97
[REFUSED]	98

[LOOP THROUGH BMP4 THROUGH BMP5b FOR EACH RESPONSE TO BMN2]

BMP4. What percentage of your <BMN2 RESPONSE> usage is provided by the biomass system?

RECORD RESPONSE	_____
[DON'T KNOW]	97
[REFUSED]	98

BMP5. What type of back-up fuel do you use for your <BMN2 RESPONSE> system.

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO BMP5d]
Propane	4	[GO TO BMP5d]
Nothing	5	[GO TO BMP5f]
Other, Specify	_____	[GO TO BMP5d]
REFUSED	97	[GO TO BMP5d]
DON'T KNOW	98	[GO TO BMP5d]

BMP5a. How much fuel does this backup <BMN2 RESPONSE> system use per year?

RECORD FUEL USAGE AND UNITS]	_____	[GO TO BMP5c]
[DON'T KNOW]	97	
[REFUSED]	98	

BMP5b. How much does your backup <BMN2 RESPONSE> system fuel cost per year?

RECORD FUEL COST (\$)	_____
[DON'T KNOW]	97
[REFUSED]	98

BMP5c. What type of <BMN2 RESPONSE> system is this?

Furnace	1
Boiler	2
Tank water heater	3
Tankless water heater	4
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

BMP5d. Was this backup <BMN2 RESPONSE> system in place before the biomass system was installed?

[YES]	1	[GO TO BMP5g]
[NO]	2	
[DON'T KNOW]	97	[GO TO BMP5g]
[REFUSED]	98	[GO TO BMP5g]

BMP5e. What type of system was used prior to the <BMN2 RESPONSE> biomass system?

Furnace	1	
Boiler	2	
Tank water heater	3	
Tankless water heater	4	
None	5	[GO TO BMP6]
Other, Specify	_____	
[DON'T KNOW]	97	
[REFUSED]	98	

BMP5f. What type of fuel was used by the system that your biomass system replaced?

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO BMP6]
Propane	4	[GO TO BMP6]
Other, Specify	_____	[GO TO BMP6]
[DON'T KNOW]	97	[GO TO BMP6]
[REFUSED]	98	[GO TO BMP6]

BMP5g. How much fuel did this <BMN2 RESPONSE> system use per year prior to the biomass system installation?

RECORD FUEL USAGE AND UNITS	_____	[GO TO BMP6]
[DON'T KNOW]	97	
[REFUSED]	98	

BMP5h. How much did this <BMN2 RESPONSE> system's fuel cost per year prior to the biomass system installation?

RECORD FUEL COST (DOLLARS)	_____
[DON'T KNOW]	97
[REFUSED]	98

BMP6. What percentage of the expected energy savings has your system actually produced?

[RECORD RESPONSE] _____

BMP6a. [IF BMP6 NOT EQUAL 100%]

Why do think the actual savings are different from the expected savings?

[RECORD RESPONSE] _____

RENEWABLES SUBMODULE: BIOGAS

[IF &BIOGAS = TRUE]

UNITS

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE, ASK QUESTIONS BGU1 THROUGH BGU4.]

With Measure Data

Check here if these measures were: Rebated Financed or Directly installed

BGU1. Our records indicate that you installed &BG_TECH biogas units through the &PROGRAM. Is this correct?

[YES]	1	[GO TO BGU2]
[NO]	2	[GO TO BGU1a]
[DON'T KNOW]	97	[GO TO BGU1a]
[REFUSED]	98	[GO TO BGU1a]

BGU1a. What is the manufacturer and model number of your biogas units?

RECORD MANUFACTURER RECORD MODEL	_____ _____	[GO TO BGU2]
[DON'T KNOW]	97	[GO TO BGU2]
[REFUSED]	98	[GO TO BGU2]

BGU2. Our records show that you installed &BG_NUM of these units through the program. Is this correct?

[YES]	1	[GO TO BGU3]
[NO]	2	[GO TO BGU2a]
[DON'T KNOW]	97	[GO TO BGU3]
[REFUSED]	98	[GO TO BGU3]

BGU2a. What is the correct number of this type of biogas unit that you installed through the program?

ENTER NUMBER	_____	[GO TO BGU2b]
[DON'T KNOW]	97	[GO TO BGU2b]
[REFUSED]	98	[GO TO BGU2b]

BGU2b. Why did you install a different number of this type of unit?

Have no idea why numbers differ	1	[GO TO BGU3]
Put some in storage	2	[GO TO BGU3]
Installed somewhere else	3	[GO TO BGU3]
Insufficient financial resources to complete full amount	4	[GO TO BGU3]
Other, Specify	_____	[GO TO BGU3]
[DON'T KNOW]	97	[GO TO BGU3]
[REFUSED]	98	[GO TO BGU3]

BGU3. Are all of these units still installed?

[YES]	1	[GO TO BGU1 FOR NEXT &BG_TECH]
[NO]	2	[GO TO BGU3a]
[DON'T KNOW]	97	[GO TO BGU1 FOR NEXT &BG_TECH]
[REFUSED]	98	[GO TO BGU1 FOR NEXT &BG_TECH]

BGU3a. How many of these units have been removed?

ENTER NUMBER	_____	[GO TO BGU3b]
[DON'T KNOW]	97	[GO TO BGU3b]
[REFUSED]	98	[GO TO BGU3b]

BGU3b. Why did you remove some of the units?

SPECIFY	_____	[GO TO BGU1 FOR NEXT &BG_TECH]
[DON'T KNOW]	97	[GO TO BGU1 FOR NEXT &BG_TECH]
[REFUSED]	98	[GO TO BGU1 FOR NEXT &BG_TECH]

BGU4. Are there other types of biogas units installed through the &PROGRAM?

[YES]	1	[GO TO BGU2 for next unit type]
[NO]	2	[GO TO BGN1]
[DON'T KNOW]	97	[GO TO BGN1]
[REFUSED]	98	[GO TO BGN1]

[IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, OR INFORMATION IS NEEDED ABOUT ADDITIONAL UNITS, ASK BGU5 THROUGH BGU7]

Without Measure Data

Check here if these measures were: [] Rebated [] Financed or [] Directly installed

BGU5. What is the manufacturer and model number of your biogas units?

RECORD MANUFACTURER RECORD MODEL	_____	[GO TO BGU5a]
[DON'T KNOW]	97	[GO TO BGU5a]
[REFUSED]	98	[GO TO BGU5a]

BGU5a. How many of that type of unit have been installed through the &PROGRAM?

ENTER NUMBER	_____	[GO TO BGU6]
[DON'T KNOW]	97	[GO TO BGU6]
[REFUSED]	98	[GO TO BGU6]

BGU6. Are all of these units still installed?

[YES]	1	[GO TO BGU7]
[NO]	2	[GO TO BGU6a]
[DON'T KNOW]	97	[GO TO BGU7]
[REFUSED]	98	[GO TO BGU7]

BGU6a. How many of these units have been removed?

ENTER NUMBER	_____	[GO TO BGU6b]
[DON'T KNOW]	97	[GO TO BGU6b]
[REFUSED]	98	[GO TO BGU6b]

BGU6b. Why did you remove some of the units?

SPECIFY	_____	[GO TO BGU7]
[DON'T KNOW]	97	[GO TO BGU7]
[REFUSED]	98	[GO TO BGU7]

[IF BGU5=97 OR 98, GO TO BGN1]

BGU7. Are there other types of biogas units installed through the &PROGRAM?

[YES]	1	[GO TO BGU5 for next unit type]
[NO]	2	[GO TO BGN1]
[DON'T KNOW]	97	[GO TO BGN1]
[REFUSED]	98	[GO TO BGN1]

INSTALLATION

BGN1. When was your biogas system installed?

RECORD Month and Year (if possible get day)	_____
[DON'T KNOW]	97
[REFUSED]	98

BGN2. Have you modified the system since it was first installed?

[YES]	1	
[NO]	2	[GO TO BGS1]
[DON'T KNOW]	97	[GO TO BGS1]
[REFUSED]	98	[GO TO BGS1]

BGN2a. Was the modification an addition, an equipment replacement, or something else?

[Addition]	1	
[Replacement]	2	[GO TO BGN2c]
[Addition and replacement]	3	
[Other, Specify]	_____	[GO TO BGN2d]
[DON'T KNOW]	97	[GO TO BGN2d]
[REFUSED]	98	[GO TO BGN2d]

BGN2b. What have you added?

RECORD RESPONSE - note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF BGN2a=1, GO TO BGN2d]

BGN2c. What did you replace?

RECORD RESPONSE - note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

BGN2d. When did you make these changes?

RECORD RESPONSE - note changes to capacity	_____
[DON'T KNOW]	97
[REFUSED]	98

BGN2e. Why did you make these changes?

SPECIFY	_____
[DON'T KNOW]	97
[REFUSED]	98

BIOGAS SOURCES

BGS1. Does your biogas come from an influent or manure digester, landfill gas, or another source? **[CIRCLE ALL THAT APPLY]**

Digester	1	
Landfill Gas	2	[GO TO BGP1]
Other, specify	_____	[GO TO BGP1]
	-	
[DON'T KNOW]	97	[GO TO BGP1]
[REFUSED]	98	[GO TO BGP1]

BGS2. What percentage of the following types of materials make up your biodigester influent, not including animal bedding? **[READ LIST AND ENTER PERCENT FOR EACH]**

Manure _____
 Other Agricultural Waste _____
 Other, specify____ _____

[IF SUM OF RESPONSES TO BGS2 <100%, PROMPT SAYING "These responses add to <Sum of BGS2 Responses>. Would you to adjust the categories, or is there another source not mentioned?"]

[IF BGS2 "Manure" response <10%, GO TO BGS3]

BGS2a. Of the manure, what percent comes from the following animals?

ENTER PERCENT FOR EACH	
Chicken	_____
Cow	_____
Swine	_____
Other, Specify	_____
Other 2, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF SUM OF RESPONSES TO BGS2a <100%, PROMPT SAYING "These responses add to <Sum of BGS2a Responses>. Would you to adjust the categories, or is there another source not mentioned?"]

BGS2b. Does your manure mixture include animal bedding?

[YES]	1
[NO]	2
[DON'T KNOW]	97
[REFUSED]	98

BGS3. What is the total volume or mass of material fed to your digester on average, per month?

ENTER MASS OR VOLUME AND UNITS	_____
[DON'T KNOW]	97
[REFUSED]	98

PRODUCTION

BGP1. What percentage of the biogas produced are you... [READ LIST, ENTER PERCENT FOR EACH]

Using onsite in a generator	_____
Using by digester for heating influent	_____
Using in vehicles	_____
Flaring onsite	_____
Selling off site	_____
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF SUM OF RESPONSES TO BGP1 <100%, PROMPT SAYING “These responses add to <Sum of BGP1 Responses>. Would you to adjust the categories, or is there another use not mentioned?”]

BGP2. Did your system begin operating on the date it was installed?

[YES]	1	[GO TO BGP3]
[NO]	2	
[DON'T KNOW]	97	[GO TO BGP3]
[REFUSED]	98	[GO TO BGP3]

BGP2a When did it begin operating?

RECORD Month and Year (if possible get day)		_____
[DON'T KNOW]	97	[GO TO BGP3]
[REFUSED]	98	[GO TO BGP3]

BGP3. Are there differences in energy production seasonally or between years

[YES]	1	
[NO]	2	[GO TO BGP4]
Other, Specify	_____	
[DON'T KNOW]	97	[GO TO BGP4]
[REFUSED]	98	[GO TO BGP4]

BGP3a. Describe the production changes the system sees yearly, and between years.

BGP4. Are there differences in how you use the biogas seasonally or between years?

[YES]	1	
[NO]	2	[GO TO BGP5]
Other, Specify	_____	
[DON'T KNOW]	97	[GO TO BGP5]
[REFUSED]	98	[GO TO BGP5]

BGP4a. Describe the usage changes the system sees yearly, and between years.

BGP5. Has there been any major down-time (more than a few days) with the system since installation?

[YES]	1	
[NO]	2	[GO TO BGP6]
[DON'T KNOW]	97	[GO TO BGP6]
[REFUSED]	98	[GO TO BGP6]

BGP5a. Why was the system down?

RECORD RESPONSE	_____
[DON'T KNOW]	97
[REFUSED]	98

BGP5b. Please describe what components of the system stopped operating, and whether other components were able to operate?

RECORD RESPONSE	_____
[DON'T KNOW]	97
[REFUSED]	98

BGP5c. How long was the most substantial downtime period, and when did it occur?

WHEN: RECORD Month and Year (if possible get day)	_____
FOR HOW LONG: RECORD Months, Years, Days (if possible)	_____
[DON'T KNOW]	97
[REFUSED]	98

[IF BGP1: "Using onsite in a generator" = 0%, GO TO BGP8]

Electrical Generation

BGP6. Please tell me your rated generation capacity for all operating generators, not including backup generator capacity.

RECORD RESPONSE in kw	_____
[DON'T KNOW]	97
[REFUSED]	98

BGP7. Please tell me the total kWh production of the system since it started generating power. If you DON'T KNOW exactly, your best estimate is ok.

kWh	_____
[DON'T KNOW]	97
[REFUSED]	98

BGP7a. How did you determine the total kWh production? [\[READ CHOICES, CIRCLE ALL THAT APPLY\]](#)

Read-out display on generator	1	
Separate utility meter for biogas production	2	[GO TO BGP8]
Computer tracking software	3	[GO TO BGP8]
Estimate	4	[GO TO BGP8]
Other, Specify	_____	[GO TO BGP8]
[DON'T KNOW]	97	[GO TO BGP8]
[REFUSED]	98	[GO TO BGP8]

BGP7b When was the display last reset?

RECORD RESET DATE	_____
[Not Applicable]	96
[DON'T KNOW]	97
[REFUSED]	98

[\[IF BGP1: "Using onsite for heating" = 0%, "Using in vehicles"=0%, "Used by digester for heating influent"=0%, and "Selling off site"=0%, GO TO BGP10\]](#)

Fuel Production

BGP8. Please tell me the total amount of biogas produced by the system for use in vehicles, heating, and for sale . If you DON'T KNOW exactly, your best estimate is ok.

[TOTAL PRODUCTION UNITS]	_____
[DON'T KNOW]	97
[REFUSED]	98

BGP8a. How did you determine the total production? [\[READ CHOICES, CIRCLE ALL THAT APPLY\]](#)

Read-out display on generator	1	
Separate utility meter for biogas production	2	[GO TO BGP9]
Computer tracking software	3	[GO TO BGP9]
Estimate	4	[GO TO BGP9]
Other, Specify _____		[GO TO BGP9]
[DON'T KNOW]	97	[GO TO BGP9]
[REFUSED]	98	[GO TO BGP9]

BGP8b When was the display last reset?

RECORD RESET DATE	_____
[Not Applicable]	96
[DON'T KNOW]	97
[REFUSED]	98

BGP9. How did you determine the total amount of biogas produced? [\[READ CHOICES, CIRCLE ALL THAT APPLY\]](#)

Separate utility meter for biogas production	1
Computer tracking software	2
Estimate	3
Other, Specify _____	
[DON'T KNOW]	97
[REFUSED]	98

[\[IF BGP1: "Using onsite for heating" > 0%, ASK BGP10 through BGP11h, ELSE GO TO BGP12\]](#)

Other Heating Sources

BGP10. What percentage of your heating usage is provided by the biogas system?

RECORD PERCENTAGE	_____
[DON'T KNOW]	97
[REFUSED]	98

BGP11. What type of back-up fuel do you use for your biogas heating system?

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO BGP11d]
Propane	4	[GO TO BGP11d]
Nothing	5	[GO TO BGP11d]
Other, Specify	_____	[GO TO BGP11d]
[DON'T KNOW]	97	[GO TO BGP11d]
[REFUSED]	98	[GO TO BGP11d]

BGP11a. How much fuel does this backup heating system use per year?

RECORD FUEL USAGE AND UNITS	_____	[GO TO BGP11c]
[DON'T KNOW]	97	
[REFUSED]	98	

BGP11b. How much does your backup heating system fuel cost per year?

RECORD FUEL COST (\$)	_____
[DON'T KNOW]	97
[REFUSED]	98

BGP11c. What type of heating system is this?

Furnace	1
Boiler	2
Tank water heater	3
Tankless water heater	4
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

BGP11d. Was this heating system in place before the biogas system was installed?

[YES]	1	[GO TO BGP11g]
[NO]	2	
[DON'T KNOW]	97	[GO TO BGP12]
[REFUSED]	98	[GO TO BGP12]

BGP11e. What type of system was used prior to the heating biogas system?

Furnace	1	
Boiler	2	
Tank water heater	3	
Tankless water heater	4	
None	5	[GO TO BGP12]
Other, Specify	_____	
[DON'T KNOW]	97	
[REFUSED]	98	

BGP11f. What type of fuel was used by the system that your biomass system replaced?

Natural Gas	1	
Electricity	2	
Oil	3	[GO TO BGP12]
Propane	4	[GO TO BGP12]
Other, Specify	_____	[GO TO BGP12]
[DON'T KNOW]	97	[GO TO BGP12]
[REFUSED]	98	[GO TO BGP12]

BGP11g. How much fuel did this heating system use per year prior to the biogas system installation?

RECORD FUEL USAGE AND UNITS	_____	[GO TO BGP12]
[DON'T KNOW]	97	
[REFUSED]	98	

BGP11h. How much does this heating system's fuel cost per year prior to the biogas system installation?

RECORD FUEL COST (dollars)	_____	
[DON'T KNOW]	97	
[REFUSED]	98	

[IF BGP1: "Using in vehicles" > 0%, ASK BGP12, ELSE GO TO BGP13]

BGP12. What fuels did your vehicles use prior to conversion to biogas?

Gasoline	1
Diesel	2
Propane	3
Natural Gas	4
[DON'T KNOW]	97
[REFUSED]	98

BGP13. What percentage of the expected savings has your system actually produced?

BGP13a. [IF BGP13 NOT EQUAL 100%]

Why do think the actual savings are different from the expected savings?

[RECORD RESPONSE] _____

RENEWABLES SUBMODULE: OTHER TECHNOLOGIES

[IF & OTHER = TRUE]

In this section we'll be discussing &OE_TECH that received support from &SPONSOR &PROGRAM.

I am going to discuss some technical information about your &OE_TECH system in order to confirm our information. The paperwork from the original site survey, design study, or installation may help you answer these questions.

UNITS

[IF MEASURE-LEVEL RECORDS ARE AVAILABLE, ASK QUESTIONS OU1 THROUGH OU4]

With Measure Data

Check here if these measures were: Rebated Financed or Directly installed

OU1. Our records indicate that you installed &OE_TECH units through the &PROGRAM. Is this correct?

[YES]	1	[GO TO OU2]
[NO]	2	[GO TO OU1a]
[DON'T KNOW]	97	[GO TO OU1a]
[REFUSED]	98	[GO TO OU1a]

OU1a. What is the manufacturer and model number of your &OE_TECH units?

RECORD MANUFACTURER RECORD MODEL	_____	[GO TO OU2]
[DON'T KNOW]	97	[GO TO OU2]
[REFUSED]	98	[GO TO OU2]

OU2. Our records show that you installed &OE_NUM of these units through the program. Is this correct?

[YES]	1	[GO TO OU3]
[NO]	2	[GO TO OU2a]
[DON'T KNOW]	97	[GO TO OU3]
[REFUSED]	98	[GO TO OU3]

OU2a. What is the correct number of this type of &OE_TECH unit that you installed through the program?

ENTER NUMBER	_____	[GO TO OU2b]
[DON'T KNOW]	97	[GO TO OU2b]
[REFUSED]	98	[GO TO OU2b]

OU2b. Why did you install a different number of this type of unit?

Have no idea why numbers differ	1	[GO TO OU3]
Put some in storage	2	[GO TO OU3]
Installed somewhere else	3	[GO TO OU3]
Insufficient financial resources to complete full amount	4	[GO TO OU3]
Other, Specify	_____	[GO TO OU3]
[DON'T KNOW]	97	[GO TO OU3]
[REFUSED]	98	[GO TO OU3]

OU3. Are all of these units still installed?

[YES]	1	[GO TO OU1 FOR NEXT &OE_TECH]
[NO]	2	[GO TO OU3a]
[DON'T KNOW]	97	[GO TO OU1 FOR NEXT &OE_TECH]
[REFUSED]	98	[GO TO OU1 FOR NEXT &OE_TECH]

OU3a. How many of these units have been removed?

ENTER NUMBER	_____	[GO TO OU3b]
[DON'T KNOW]	97	[GO TO OU3b]
[REFUSED]	98	[GO TO OU3b]

OU3b. Why did you remove some of the units?

SPECIFY	_____	[GO TO OU1 FOR NEXT &OE_TECH]
[DON'T KNOW]	97	[GO TO OU1 FOR NEXT &OE_TECH]
[REFUSED]	98	[GO TO OU1 FOR NEXT &OE_TECH]

OU4. Are there other types of &OE_TECH units installed through the &PROGRAM?

[YES]	1	[GO TO OU5 for next unit type]
[NO]	2	[GO TO ON1]
[DON'T KNOW]	97	[GO TO ON1]
[REFUSED]	98	[GO TO ON1]

[IF MEASURE-LEVEL RECORDS ARE NOT AVAILABLE, OR INFORMATION IS NEEDED ABOUT ADDITIONAL UNITS, ASK OU5 THROUGH OU7.]

Without Measure Data

Check here if these measures were: Rebated Financed or Directly installed

OU5. What is the manufacturer and model number of your &OE_TECH units?

RECORD MANUFACTURER RECORD MODEL	_____	[GO TO OU5a]
[DON'T KNOW]	97	[GO TO OU5a]
[REFUSED]	98	[GO TO OU5a]

OU5a. How many of that type of unit have been installed through the &PROGRAM?

ENTER NUMBER	_____	[GO TO OU6]
[DON'T KNOW]	97	[GO TO OU6]
[REFUSED]	98	[GO TO OU6]

OU6. Are all of these units still installed?

[YES]	1	[GO TO OU7]
[NO]	2	[GO TO OU6a]
[DON'T KNOW]	97	[GO TO OU7]
[REFUSED]	98	[GO TO OU7]

OU6a. How many of these units have been removed?

ENTER NUMBER	_____	[GO TO OU6b]
[DON'T KNOW]	97	[GO TO OU6b]
[REFUSED]	98	[GO TO OU6b]

OU6b. Why did you remove some of the units?

SPECIFY	_____	[GO TO OU7]
[DON'T KNOW]	97	[GO TO OU7]
[REFUSED]	98	[GO TO OU7]

[IF OU5=-97 OR -98, GO TO OU8]

OU7. Are there other types of &OE_TECH units installed through the &PROGRAM?

[YES]	1	[GO TO OU5 for next unit type]
[NO]	2	[GO TO OU8]
[DON'T KNOW]	97	[GO TO OU8]
[REFUSED]	98	[GO TO OU8]

OU8. Did you install any other kinds of energy efficiency measures through the program?

[YES]	1	[GO TO OU5 for next unit type]
[NO]	2	[GO TO OU9]
[DON'T KNOW]	97	[GO TO OU9]
[REFUSED]	98	[GO TO OU9]

OU9. When was your &OE_TECH system installed?

RECORD Month and Year (if possible get day)	_____
[DON'T KNOW]	97
[REFUSED]	98

OU10. How do you use the energy from the &OE_TECH system? **[CIRCLE ALL THAT APPLY]**

Space heating	1
Water Heating	2
Industrial Process Heating	3
Other, Specify	_____
[DON'T KNOW]	97
[REFUSED]	98

END RENEWABLESMODULE

GOTO "SECTION G: ATTRIBUTION"

SECTION G: ATTRIBUTION (DAT, DAE)

Now, I'd like to ask you a few questions about the effect that the &PROGRAM had on your organization's decision to undertake the project we are discussing.

OVERALL INFLUENCE

[FOR EACH MEASURE GROUP COVERED ABOVE REPEAT DAT0]

DAT0. If you hadn't received support from the EECBG Program, how likely would you say it is that you would have [installed / performed] the &MEASURE? Would you say it was... [READ LIST FOR EACH MEASURE TYPE]

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
Very likely	1	1	1	1
Somewhat likely	2	2	2	2
Not very likely	3	3	3	3
Or very unlikely	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).

DAT1. I'd like to know about the effect, if any, that EECBG had on the timing of your project. Without the support for the &PROJECT_TITLE from EECBG, would you have implemented the project 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 in the absence of the program?

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
Same time	1	1	1	1
Earlier	2	2	2	2
Later	3	3	3	3
Would not have installed	4	4	4	4
[Don't know]	97	97	97	97
[Refused]	98	98	98	98

DAT1a. Why do you say that?

[RECORD VERBATIM]_____

[IF DAT1 ≠ LATER, SKIP TO DAE1]

DAT1b. Approximately how many months or, years later? [REPEAT FOR EACH MEASURE TYPE]

[Try to get a number. Try bracketing if necessary by beginning with more or less than four years later.]

	DAT1_&MEASURE
[RECORD # OF MONTHS]	_____
[Don't know]	97
[Refused]	98

EFFICIENCY

ASK EFFICIENCY QUESTIONS OF ALL RESPONDENTS. NOTE: This is only appropriate to be asked for non-binary measures. Don't ask for things like lighting controls, HVAC controls, service measures (tune-ups), VFDs.

DAE1. Without the EECBG Program, would you have installed &MEASURE of the exact same energy efficiency as the equipment you installed or would you have installed lower or higher efficiency equipment?

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
Same	1	1	1	1
Lower	2 [ASK DAE2]	2 [ASK DAE2]	2 [ASK DAE2]	2 [ASK DAE2]
Higher	3	3	3	3
[Not applicable]	88	88	88	88
[Don't know]	97	97	97	97
[Refused]	98	98	98	98

DAE1a. Please explain why? [RECORD VERBATIM]:_____

[IF DAE1 ≠ LOWER, SKIP TO DAQ1.]

DAE2. Without the support of the program , would you have installed &MEASURE that was:

RESPONSE	DAT0_MID1	DAT0_MID2	DAT0_MID3	DAT0_MID4
Standard efficiency or according to code	1	1	1	1
Slightly higher than standard efficiency	2	2	2	2
Approximately half-way between standard efficiency and the efficiency that was installed	3	3	3	3
Slightly lower than the high efficiency that was installed	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 EECBG Program had on the scale of &PROJECT_TITLE completed with the support of the program.

DAQ1. Without the support from the EECBG Program would you have installed more &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 DAQ3a	2 Read DAQ3a	2 Read DAQ3a	2 Read DAQ3a
More or larger	3 Read DAQ3a	3 Read DAQ3a	3 Read DAQ3a	3 Read DAQ3a
Not at all	4	4	4	4
[Not Applicable]	5	5	5	5
[Don't know]	97	97	97	97
[Refused]	98	98	98	98

DAQ2. Please explain why?[RECORD VERBATIM]_____

[IF DAQ1 = SAME or NOT INSTALLED ANY, SKIP TO OT1.]

DAQ3. By what percentage, if any, do you think you increased or decreased the amount of &MEASURE installed because of the EECBG?

RESPONSE	DAQ3_MID1	DAQ3_MID2	DAQ3_MID3	DAQ3_MID4
[RECORD % indicate increase or decrease]	_____%	_____%	_____%	_____%
[Don't know]	97	97	97	97
[Refused]	98	98	98	98

DAQ4. In your own words, what effect did the EECBG funding have on your implementation of this project and &MEASURE?

[RECORD VERBATIM:]_____

[REPEAT SERIES FOR EACH MEASURE]

SECTION H: OTHER PROGRAMS AND ASSISTANCE (OP)

OP1 In completing the &PROJECT_TITLE supported by the EECBG Program, did you make use of financial or technical support programs offered by other 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 PERFORMANCE FACTORS]
[Don't know]	97	[GO TO PERFORMANCE FACTORS]
[Refused]	98	[GO TO PERFORMANCE FACTORS]

OP2. Which organization[s] sponsored the [these] program[s]?

[\[RECORD RESPONSE\]](#) _____

IF THE ONLY ORGANIZATIONS MENTIONED ARE MANUFACTURERS, DISTRIBUTORS, CONTRACTORS, OR ENGINEERS, SKIP TO BC1.

OP3. What kinds of services did you receive from those programs in support of the project?

Information to guide project planning and equipment selection	1	[GO TO OP5]
Technical training on the design and installation of the project	2	[GO TO OP5]
Technical assistance such as feasibility assessments, financial analyses, and design support	3	[GO TO OP5]
Identification of qualified contractors	4	[GO TO OP5]
Financial incentives: grants, rebates, others that do not need to be repaid	5	[ASK OP4]
Financial incentives: reduced interest loans, loan guarantees, leases, etc.	6	[ASK OP4]
Equipment or materials	7	[ASK OP4]
Labor (in kind or voluntary)	8	[ASK OP4]
Support for negotiation and contracting with vendors	9	[GO TO OP5]
Inspections of completed work for quality control	10	[GO TO OP5]
Other (Specify)-_____	—	[GO TO OP5]
[Don't know]	97	[GO TO OP5]
[Refused]	98	[GO TO OP5]

OP4. What percent of the total funding for the energy efficiency project we have been discussing did you receive from programs other than &PROGRAM? Your best estimate will be fine.

Enter Percent	_____	[GO TO OP5]
][Don't know]	97	[GO TO OP4a]
[Refused]	98	[GO TO OP4a]

OP5. If you had been able to access **only** the resources of the &SPONSOR &PROGRAM, but not those of the other programs from which you received support, how likely is it that you would have carried out the &MEASURE? Would you say the likelihood of undertaking that measure was ... [\[READ LIST\]](#)

RESPONSE	OP5_MID1	OP5_MID2	OP5_MID3	OP5_MID4
Very likely	1	1	1	1
Somewhat likely	2	2	2	2
Not very likely	3	3	3	3
Or very unlikely	4	4	4	4
[Don't know]	97	97	97	97
[Refused]	98	98	98	98

OP6. If you had been able to access **only** the resources of the &SPONSOR &PROGRAM, but not those of the other programs from which you received support, would you have implemented this project &MEASURE at the same time, later, or not at all?

RESPONSE	OP6_MID1	OP6_MID2	OP6_MID3	OP6_MID4
Same time	1	1	1	1
Later	2	2	2	2
Not at all	3	3	3	3
[Not Applicable]	4	4	4	4
[Don't know]	97	97	97	97
[Refused]	98	98	98	98

OP7. Did you first become aware of the opportunities to reduce energy use through the EECBG Program, through the other energy efficiency programs in which you participated, or through another source?

Through the EECBG PA	1
Through other energy efficiency program [s]	2
Through another source	3
[Don't know]	97
[Refused]	98

OP8 In your opinion, how important was the EECBG Program in encouraging and enabling you [your organization] to carry out the energy efficiency project we have been discussing; relative to the other program(s)? Would you say the EECBG Program was.....

Much more important than the other program(s)	1
Somewhat more important than the other program(s)	2
Equally important than the other program(s)	3
Somewhat less important than the other program(s)	4
Much less important than the other program(s)	5
[Don't know]	97
[Refused]	98

END