**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

Part II (on-line)

Part I (phone)

Part II (on-line)

Part I (phone)

**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](mailto: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] |
| 1. Financial Incentives | [GO TO BP3B] |
| 1. Buildings and Facilities | [GO TO BP3C] |
| 1. Lighting (Street and Traffic) | [GO TO BP3D] |
| 1. On-Site Renewable Technology | [GO TO BP3E] |
| 1. 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 range of policies and programs being implemented by grant recipients that do not easily fit into other categories | 6 | [GO TO BP3F] |
| 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** |  |
| 1. EnergyEfficiencyBuilding Retrofits | 1. Appliances | [GO TO BP4] |
|  | 1. Boiler | [GO TO BP4] |
|  | 1. Building Envelope | [GO TO BP4] |
|  | 1. Cool Roofing | [GO TO BP4] |
|  | 1. Compressed Air | [GO TO BP4] |
|  | 1. Fans | [GO TO BP4] |
|  | 1. HVAC | [GO TO BP4] |
|  | 1. Insulation | [GO TO BP4] |
|  | 1. Lighting (Exterior) | [GO TO BP4] |
|  | 1. Lighting (Interior) | [GO TO BP4] |
|  | 1. Motors | [GO TO BP4] |
|  | 1. Process Heat | [GO TO BP4] |
|  | 1. Pumps | [GO TO BP4] |
|  | 1. Sensors | [GO TO BP4] |
|  | 1. Solar Hot Water | [GO TO BP4] |
|  | 1. Steam | [GO TO BP4] |
|  | 1. Water Heating | [GO TO BP4] |
|  | 1. Water Saving | [GO TO BP4] |
|  | 1. Other | [GO TO BP4] |
| 1. Financial Incentives | 1. Interest Rate Buy-down | [GO TO BP4] |
|  | 1. Loan Loss Reserve | [GO TO BP4] |
|  | 1. On Bill Financing | [GO TO BP4] |
|  | 1. PACE (Property Assessed Clean Energy) | [GO TO BP4] |
|  | 1. Performance Contracting | [GO TO BP4] |
|  | 1. Power Purchase Agreement |  |
|  | 1. Rebates: Appliance | [GO TO BP4] |
|  | 1. Rebates: Non-Appliance | [GO TO BP4] |
|  | 1. Revolving Loan Fund | [GO TO BP4] |
|  | 1. Sub-grant | [GO TO BP4] |
|  | 1. Tax Credits | [GO TO BP4] |
|  | 1. Other | [GO TO BP4] |
| 1. Buildings and Facilities | 1. Architecture, Design, and Engineering | [GO TO BP4] |
|  | 1. Energy Efficiency Rating and Labeling | [GO TO BP4] |
|  | 1. Energy Management Systems | [GO TO BP4] |
|  | 1. Measurement and Verification | [GO TO BP4] |
| 1. Lighting | 1. Street Lighting | [GO TO BP4] |
|  | 1. Traffic Lighting | [GO TO BP4] |
| 1. Renewable Energy | 1. Anaerobic Digestion | [GO TO BP4] |
|  | 1. Biomass/Biofuel | [GO TO BP4] |
|  | 1. Fuel Cells | [GO TO BP4] |
|  | 1. Ground Source Geothermal | [GO TO BP4] |
|  | 1. Hydropower | [GO TO BP4] |
|  | 1. Solar Photovoltaics | [GO TO BP4] |
|  | 1. Solar Thermal | [GO TO BP4] |
|  | 1. Wind Power | [GO TO BP4] |
| 1. Energy Efficiency and Conservation Strategy | 1. Training and workshops | [GO TO BP4] |
|  | 1. Education and information | [GO TO BP4] |
|  | 1. Community Sustainability Plan | [GO TO BP4] |
|  | 1. \_\_\_ | [GO TO BP4] |
| 1. Other | RECORD: \_\_\_ | [GO TO BP4] |
| 1. [Don’t know] | 97 |  |
| 1. [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]

|  |  |
| --- | --- |
| 1. An energy audit report | Y N DK |
| 1. Diagnostic testing results from [BEFORE/AFTER] the project  (e.g., blower door, infrared scan or other tests) | Y N DK |
| 1. A description of the characteristics of the old measures or building features that were removed, replaced or altered through the project | Y N DK |
| 1. A description of the characteristics of the new measures or building features that were INSTALLED through the project | Y N DK |
| 1. Specific details as to the efficiency levels, age, size and name plate data of old equipment that was REPLACED | Y N DK |
| 1. Specific details as to the efficiency levels, size and name plate data of new equipment that was INSTALLED | Y N DK |
| 1. 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?

1. Yes - Will send now
2. Yes – Will send later
3. Not sure – Require approval
4. No
5. 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 not 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 timejob 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 |

**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:

1. How much equipment has been treated to date?

|  |  |
| --- | --- |
| [RECORD NUMBER] | \_\_\_\_\_\_\_\_\_\_\_ |
| [Don’t know] | 97 |
| [Refused] | 98 |

1. 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:

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

|  |  |
| --- | --- |
| [RECORD NUMBER] | \_\_\_\_\_\_\_\_\_\_\_ |
| [Don’t know] | 97 |
| [Refused] | 98 |

1. 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.”**

**ACTIVITY = RESIDENTIAL RESIDENTIAL TRACK**



**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 |

***I*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 thissection 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 kids 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]

**LI4lm– LI4o.** How many fixtures of the &LI\_TECH serve each of the following spaces?

| L14m | Common Area Hallways |
| --- | --- |
| L14n | Common Area Laundry |
| L14o | Common Area Meeting Rooms |

RESPONSE GRID FOR LI4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **&LI\_TECH** | **LI4a Living/FR**  **Fixtures** | **LI4b Dining Room**  **Fixtures** | **LI4c  Den/Office**  **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** | **LI4o  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 though 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 |  |  |  |  |  |  |  |  |
| **77** | Other (Specify) |  |  |  |  |  |  |  |  |
| **97** | [Don’t know] |  |  |  |  |  |  |  |  |
| **98** | [Refused] |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| 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] |

**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]**

**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 &GT\_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\_\_\_\_\_\_\_\_\_\_  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\_TECHtotal 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 AP2j] |
| [Don’t know] | 97 | [Don’t know] | 97 | [GO TO AP2j] |
| [Refused] | 98 | [Refused] | 98 | [GO TO AP2j] |

**RESPONSE GRID FOR AP1 AND AP2**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **&AP\_TECH** | **AP1a Tracking Verified** | **AP1b Corrected # Install** | **AP2b**  **# installed** | **AP2c**  **# NewCapacity** | **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**



**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? |  |

***GRAPHICS***

**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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **&LI\_TECH** | **LI4a Sq Ft Lit** | **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** |
|  | ***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 CAPACITYMEASUREMENTUNITS (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 though 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** | **RF2f Size** | **RF2g Size units** | **RF2h Size New Capacity** | **RF2i Units New Capacity** | **RF2j Hours Open** | **RF2k Traffic** | **RF2l Insul-ation** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **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 process 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: |  |  |  |  |  |

**OTHER MEASURES**

**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  RECORD MODEL | \_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_ | [GO TO PVU5a] |
| [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  RECORD MODEL | \_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_ | [GO TO SWU5a] |
| [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 *un*likely | 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 *un*likely | 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 |

**OP9** Please explain why.

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

**END**