**Harmonized Survey Questions for**

**Monitoring Household Energy Use and   
SDG Indicators 7.1.1 & 7.1.2**

**Concise Roster Format**

Updated November 2019



This document contains a set of **questions essential to monitor SDG Indicator 7.1.2 on primary reliance on clean fuels and technologies, as well as SDG 7.1.1** **on the proportion of the population with access to electricity**. These questions were developed by the World Health Organization (WHO) and the World Bank Group in consultation with a diverse group of stakeholders convened in a set of several expert consultations, and have also been extensively piloted.

**The essential questions for monitoring SDG 7.1.2 and SDG 7.1.1 are marked with an asterisk (\*), totaling 13 questions.** These questions are available in three versions to facilitate integration to existing surveys, including versions that align with common national surveys like the USAID’s Demographic and Health Surveys (DHS) or UNICEF’s Multiple Indicator Cluster Surveys (MICS). All three versions of survey questions capture the same key data:

1. fuels and technologies used the most time for cooking, heating and lighting (i.e., primary reliance);
2. all other fuels and technologies used by the household for cooking, heating and lighting;
3. electricity access in the household;
4. time use, fuel collection, injuries and health;
5. main source of electricity and appliances used (for solar energy);
6. availability of electricity supply;
7. reliability of electricity supply.

Supporting documentation for the use of the survey questions includes:

* *Household Energy Use Survey Question Guide,* designed for statistical agencies and programs using the questions to understand the importance of each survey question, and how to calculate relevant indicators.
* *Household Energy Use Catalog*, includes detailed descriptions of all answer options for the survey questions, including pictorial examples.
* *Household Energy Use Survey Questions: Interviewer Manual*, designed for use in enumerator training, and as a reference tool for survey teams both preceding and during data collection.

If these household energy questions are implemented following the instructions included in the supporting documentation, consistent and comparable monitoring of household energy use patterns across time and populations will be possible.

***Overview of general instructions for administering questions***

* Questions should be administered to a reference person in the household (a person who knows about cooking, heating and lighting practices, such as the head of the household or main cook).
* Questions are provided that guide the interviewer to skip certain sections if cooking, heating or lighting are not performed in the household. Additionally, certain countries may choose to omit the module on heating if it is not applicable.
* Questions can be adapted to both pen & paper or electronic data collection methodologies.
* Questions are written to be administered through one-on-one, in-person interviews, which can be part of national census and household surveys or suitable for use in smaller projects.
* Italicized text indicates instructions to the interviewer. This text should not be read aloud to the respondent.
* Interviewers should not read response options to respondents after administering a question, but should select the response which best fits the information given by the respondent. If the information given is not enough to select a fitting response(s), the interviewer should neutrally ask for more information by asking, for example “Could you please give me a bit more information?”
* Manufactured and traditional solid fuel cookstove definitions (more details and photos will be provided in the supporting documentation mentioned above):
  + *Manufactured solid fuel cookstoves*: The category for manufactured cookstoves includes any cookstove that is produced and sold or distributed to the end user (including “traditional” cookstoves that are manufactured). For some manufactured cookstoves, specialized technicians come to the household to install/build the cookstove. Manufactured cookstoves are often constructed from prefabricated materials or materials usually not readily available in the immediate community. Manufactured cookstoves are often designed with improvements or advanced design features such as an improved and enclosed combustion chamber, high quality materials, and/or high quality production processes -- unlike traditional solid fuel cookstoves.
  + *Traditional solid fuel cookstoves (non-manufactured):* Traditional cookstoves are usually constructed at the home. Traditional cookstoves are made with local materials, such as mud, ceramics or clay. These cookstoves do not generally contain advanced design features but may include limited improvements over a three-stone cookstove or open fire (e.g., a pot rest, simple enclosed combustion spaces).

***Direction for Interviewer****: Please inform the respondent that you will now ask questions about cooking, fuel collection, heating, lighting, and electricity use.*

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| **HOUSEHOLD COOKING** | |
| 1. Is any food or drink consumed by household members cooked or prepared at the household dwelling using a cookstove, fire or other cooking device? | Yes………….…………..1  No………….…………...2 🡪***SKIP TO HEATING MODULE*** |
| 1. How many stoves (including open fires) are used for these activities? | Number of cookstoves…|\_\_|\_\_|  *If the respondent reports fewer than 3 cookstoves, leave extra columns (below) blank. If respondent reports use of more than 3 cookstoves, use additional sheets.* |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **a.** 1st Cookstove **(MAIN)** | **b.** 2nd Cookstove | **c.** 3rd Cookstove |
| 1. **\***What does this household use for cooking **most of the time,** including cooking food, making tea/coffee, boiling drinking water? Please tell me the cookstove or device that is used for the most time, *followed by the other cookstove(s) or device(s) used most often, if applicable.*   *(Phrase question based on response to HC2. Select one type for each cookstove.)* | Solar cooker (thermal energy, not solar panels) 01🡪HC7  Electric stove 02🡪HC6  Piped natural gas stove 03🡪HC6  Biogas stove 04🡪HC6  Liquefied petroleum gas (LPG)/ cooking gas stove 05🡪HC6  Manufactured solid fuel  stove 06  Traditional solid fuel stove  (non-manufactured) 07  Liquid fuel stove 08🡪HC5  Moveable firepan 09🡪HC5  Three stone stove/open fire 10🡪HC5  Other, specify 96 | Solar cooker (thermal energy, not solar panels) 01🡪HC7  Electric stove 02🡪HC6  Piped natural gas stove 03🡪HC6  Biogas stove 04🡪HC6  Liquefied petroleum gas (LPG)/ cooking gas stove 05🡪HC6  Manufactured solid fuel  stove 06  Traditional solid fuel stove  (non-manufactured) 07  Liquid fuel stove 08🡪HC5  Moveable firepan 09🡪HC5  Three stone stove/open fire 10🡪HC5  Other, specify 96 | Solar cooker (thermal energy, not solar panels) 01🡪HC7  Electric stove 02🡪HC6  Piped natural gas stove 03🡪HC6  Biogas stove 04🡪HC6  Liquefied petroleum gas (LPG)/ cooking gas stove 05🡪HC6  Manufactured solid fuel  stove 06  Traditional solid fuel stove  (non-manufactured) 07  Liquid fuel stove 08🡪HC5  Moveable firepan 09🡪HC5  Three stone stove/open fire 10🡪HC5  Other, specify 96 |
| 1. **\***What is the brand of the cookstove or device? | *(Pre-fill with name or brand of manufactured solid fuel stoves available in country- may add additional lines.)*  *NAME/BRAND 1 01*  *NAME/BRAND 2 02*  *NAME/BRAND 3 03*  *Other, specify 96* | *(Pre-fill with name or brand of manufactured solid fuel stoves available in country- may add additional lines.)*  *NAME/BRAND 1 01*  *NAME/BRAND 2 02*  *NAME/BRAND 3 03*  *Other, specify 96* | *(Pre-fill with name or brand of manufactured solid fuel stoves available in country- may add additional lines.)*  *NAME/BRAND 1 01*  *NAME/BRAND 2 02*  *NAME/BRAND 3 03*  *Other, specify 96* |
| 1. **\*** What type of fuel or energy source does this household use **most of the time** in this cookstove or device for cooking food, making tea/coffee and boiling drinking water? | Alcohol/ethanol 01  Gasoline/diesel  (not in generator) 02  Kerosene/paraffin 03  Coal/lignite unprocessed 04  Coal/lignite briquettes/ pellets 05  Charcoal unprocessed 06  Charcoal briquettes/pellets 07  Wood 08  Agricultural or crop residue/  grass/ straw/shrubs/  corn cobs 09  Animal waste/dung 10  Processed biomass pellets/ briquettes 11  Woodchips 12  Garbage/plastic 13  Sawdust 14  Other 96 | Alcohol/ethanol 01  Gasoline/diesel  (not in generator) 02  Kerosene/paraffin 03  Coal/lignite unprocessed 04  Coal/lignite briquettes/ pellets 05  Charcoal unprocessed 06  Charcoal briquettes/pellets 07  Wood 08  Agricultural or crop residue/  grass/ straw/shrubs/  corn cobs 09  Animal waste/dung 10  Processed biomass pellets/ briquettes 11  Woodchips 12  Garbage/plastic 13  Sawdust 14  Other 96 | Alcohol/ethanol 01  Gasoline/diesel  (not in generator) 02  Kerosene/paraffin 03  Coal/lignite unprocessed 04  Coal/lignite briquettes/ pellets 05  Charcoal unprocessed 06  Charcoal briquettes/pellets 07  Wood 08  Agricultural or crop residue/  grass/ straw/shrubs/  corn cobs 09  Animal waste/dung 10  Processed biomass pellets/ briquettes 11  Woodchips 12  Garbage/plastic 13  Sawdust 14  Other 96 |
| 1. How much did this household pay for this fuel or energy source **last month** for cooking (the last 30 days)?   *(in local currency)* | \_\_\_\_\_\_\_\_ (local currency)  Pays nothing 01  Does not know 99 | \_\_\_\_\_\_\_\_ (local currency)  Pays nothing 01  Does not know 99 | \_\_\_\_\_\_\_\_ (local currency)  Pays nothing 01  Does not know 99 |
| 1. In the **past 12 months**, how often was this fuel or energy source **unavailable** in the quantity you desired? | Often (more than once a  month) 01  Sometimes  (4-12 times a year) 02  Rarely (less than  4 times a year) 03  Never (always available) 04  Does not know / unsure 99 | Often (more than once a  month) 01  Sometimes  (4-12 times a year) 02  Rarely (less than  4 times a year) 03  Never (always available) 04  Does not know / unsure 99 | Often (more than once a  month) 01  Sometimes  (4-12 times a year) 02  Rarely (less than  4 times a year) 03  Never (always available) 04  Does not know / unsure 99 |
| 1. What other fuels and energy sources does this household use in this cookstove or device for cooking food, making tea/coffee, boiling drinking water and/or starting the fire?   *(Circle all that respondent mentions.)* | No others 01  Alcohol/ethanol 02  Gasoline/diesel (not in  generator) 03  Kerosene/paraffin 04  Coal/lignite unprocessed 05  Coal/lignite briquettes/ pellets 06  Charcoal unprocessed 07  Charcoal briquettes/pellets 08  Wood 09  Agricultural or crop residue/ grass/ straw/shrubs/corn  cobs 10  Animal waste/dung 11  Processed biomass pellets/  briquettes 12  Woodchips 13  Garbage/plastic 14  Sawdust 15  Other 96 | No others 01  Alcohol/ethanol 02  Gasoline/diesel (not in  generator) 03  Kerosene/paraffin 04  Coal/lignite unprocessed 05  Coal/lignite briquettes/ pellets 06  Charcoal unprocessed 07  Charcoal briquettes/pellets 08  Wood 09  Agricultural or crop residue/ grass/ straw/shrubs/corn  cobs 10  Animal waste/dung 11  Processed biomass pellets/  briquettes 12  Woodchips 13  Garbage/plastic 14  Sawdust 15  Other 96 | No others 01  Alcohol/ethanol 02  Gasoline/diesel (not in  generator) 03  Kerosene/paraffin 04  Coal/lignite unprocessed 05  Coal/lignite briquettes/ pellets 06  Charcoal unprocessed 07  Charcoal briquettes/pellets 08  Wood 09  Agricultural or crop residue/ grass/ straw/shrubs/corn  cobs 10  Animal waste/dung 11  Processed biomass pellets  briquettes 12  Woodchips 13  Garbage/plastic 14  Sawdust 15  Other 96 |
| 1. **Yesterday**, how much time was this cookstove used for cooking food, making tea/coffee, and boiling drinking water? | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Does not know / unsure 99 | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Does not know / unsure 99 | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Does not know / unsure 99 |
| 1. How often did you use the cookstove or cooking device **over the last week (last 7 days)** for these activities? | Several times each day 01  About once per day 02  A few times this week 03  About once this week 04  Less than once this week 05  Does not know 99 | Several times each day 01  About once per day 02  A few times this week 03  About once this week 04  Less than once this week 05  Does not know 99 | Several times each day 01  About once per day 02  A few times this week 03  About once this week 04  Less than once this week 05  Does not know 99 |
| 1. Is the cooking usually done in the house, in a separate building, or outdoors?   *(If in main house, probe to determine if cooking is done in a separate room.*  *If outdoors, probe to determine if cooking is done on veranda, covered porch, or open air.)* | In main house: no separate  room 01  In main house: separate  room 02  Outside of main house: in  a separate room 03  Outside of main house in  open air 04🡪HC13  On veranda or covered  porch 05🡪HC13  Other 96 | In main house: no separate  room 01  In main house: separate  room 02  Outside of main house: in  a separate room 03  Outside of main house in  open air 04🡪HC13  On veranda or covered  porch 05🡪HC13  Other 96 | In main house: no separate  room 01  In main house: separate  room 02  Outside of main house: in  a separate room 03  Outside of main house in  open air 04🡪HC13  On veranda or covered  porch 05🡪HC13  Other 96 |
| 1. Does the cookstove have a chimney or hood? | Yes 01  No 02  Don’t know 99 | Yes 01  No 02  Don’t know 99 | Yes 01  No 02  Don’t know 99 |
| 1. In the past 12 months, did any harm or injury happen from using this cookstove, device or fuel?   *(Circle all that respondent mentions.)* | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 |

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| **HOUSEHOLD ENERGY & GENDER** | |
| 1. ***Enumerator/CAPI check: Is the cookstove used most of the time (HC3) electric, solar or piped natural gas?*** | Yes 01🡪HG6  No 02 |
| 1. Who usually goes to collect the main fuel for the cookstove your household uses **most of the time**?   *Record the name of the person who spends the most time collecting the main fuel* ***HC5 for cookstove (a)*** *and* *copy the line number of this person from the LIST OF HOUSEHOLD MEMBERS Module. If multiple people spend the same time collecting, add additional names and line numbers.* | MEMBERS DO NOT  COLLECT 00🡪HG6  Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Line Number \_\_ \_\_  *(****if multiple collect for the same AMOUNT OF time.****)*  *SECOND PERSON Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*  *SECOND PERSON Line Number \_\_ \_\_* |
| 1. On a single trip, how long does it take for this person to go to collect the fuel, get the fuel, and come back? | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Does not know / unsure 99 |
| 1. **In the past month (the last 30 days)**, how many times has this person collected this fuel for household cooking? | Number of times in past month \_\_ \_\_  Does not know / unsure 99 |
| 1. **In the past 12 months,** did this person experience an injury while collecting or transporting fuel?   *(Prompt. Circle all.)* | No injury 00  Back pain 01  Back, neck or shoulder injury 02  Cuts or scrapes 03  Snake or animal bite 04  Other 05  Does not know / unsure 99 |
| 1. **Yesterday,** how much time in total was spent preparing the [COOKSTOVE] and fuel for cooking, including setting up the fuel and lighting/turning on the cookstove but not including gathering fuel or cooking time? *(Time spent by anyone, not use person in HG2.)* | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Does not know / unsure 99 |
| 1. Who in the household does most of the cooking, including cooking food, making tea/coffee and boiling drinking water?   *Record the name of the person and copy the line number of this person from the List of Household Members Module.* | MAIN COOK IS NOT HOUSEHOLD  MEMBER 00  Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Line Number \_\_ \_\_ |
| 1. **Yesterday**, how much time did this person spent cooking, including cooking food, tea/coffee, and boiling drinking water for household consumption? | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Does not know / unsure 99 |

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| **HOUSEHOLD HEATING** | |
| 1. Does this household use any heating device or fire to keep the dwelling/living quarters warm at any time during the year? | Yes………….…………..1  No………….…………...2 🡪***SKIP TO LIGHTING MODULE*** |
| 1. In the last 12 months, **during** **how many months** did you use a heating device or fire to keep the dwelling/living quarters warm? | Number of months…|\_\_|\_\_| |
| 1. How many space heaters, or heating devices (including cookstoves and open fires), are used in or around the dwelling to produce heat at any time during the year? | Number of heaters…|\_\_|\_\_|  *If the respondent reports using fewer than 3 heaters to produce heat in the household, leave extra columns blank. If respondent reports using more than 3 heaters, use additional sheets.* |

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|  | **a.** 1st Heater **(MAIN)** | **b.** 2nd Heater | **c.** 3rd Heater |
| 1. **\***What does this household use to heat the home when needed? For example, do you use a space heater(s), or use your cookstove in the winter for warmth? Please tell me the heaters, cookstoves or heat systems used for the **most time,** [*followed by the other heater(s), cookstove(s) or device(s) used most often, if applicable]*   *(Phrase question based on response to HH2, and select one type for each heater.)* | Central heating 01🡪HH6  Manufactured space heater 02  Traditional space heater 03  Manufactured cookstove 04  Traditional cookstove (non-manufactured) 05  Moveable heating pan 06🡪HH6  Open fire/Three-stone stove 07🡪HH6  Heat pump 08🡪HH6  Other, specify96 | Central heating 01🡪HH6  Manufactured space heater 02  Traditional space heater 03  Manufactured cookstove 04  Traditional cookstove (non-manufactured) 05  Moveable heating pan 06🡪HH6  Open fire/Three-stone stove 07🡪HH6  Heat pump 08🡪HH6  Other, specify96 | Central heating…………………..01🡪HH6  Manufactured space heater 02  Traditional space heater 03  Manufactured cookstove 04  Traditional cookstove (non-manufactured) 05  Moveable heating pan ……… 06🡪HH6  Open fire/  Three-stone stove………………07🡪HH6  Heat pump…………………………08🡪HH6  Other, specify96 |
| 1. **\*** What is the brand of the heater, cookstove or device? | *(Pre-fill with name or brand of devices available in country- may add additional lines.)*  *NAME/BRAND 1 01*  *NAME/BRAND 2 02*  *NAME/BRAND 3 03*  *Other, specify 96* | *(Pre-fill with name or brand of devices available in country- may add additional lines.)*  *NAME/BRAND 1 01*  *NAME/BRAND 2 02*  *NAME/BRAND 3 03*  *Other, specify 96* | *(Pre-fill with name or brand of devices available in country- may add additional lines.)*  *NAME/BRAND 1 01*  *NAME/BRAND 2 02*  *NAME/BRAND 3 03*  *Other, specify 96* |
| 1. **\*** What type of fuel or energy source does this household use **most of the time for heating** in this heater, cookstove or device? | Electricity (including solar  panels) 01🡪HH9  Piped natural gas 02🡪HH9  LPG/ cooking gas 03🡪HH9  Biogas 04🡪HH9  Alcohol/ethanol 05🡪HH8  Gasoline/diesel (not in  generator) 06🡪HH8  Kerosene/paraffin 07🡪HH8  Coal/lignite unprocessed 08  Coal/lignite briquettes/ pellets 09  Charcoal unprocessed 10  Charcoal briquettes/pellets 11  Wood 12  Agricultural or crop residue/  grass/ straw/ shrubs/  corn cobs 13  Animal waste/dung 14  Processed biomass pellets/  briquettes 15  Woodchips 16  Garbage/plastic 17  Sawdust 18  Other 96 | Electricity (including solar  panels) 01🡪HH9  Piped natural gas 02🡪HH9  LPG/ cooking gas 03🡪HH9  Biogas 04🡪HH9  Alcohol/ethanol 05🡪HH8  Gasoline/diesel (not in  generator) 06🡪HH8  Kerosene/paraffin 07🡪HH8  Coal/lignite unprocessed 08  Coal/lignite briquettes/ pellets 09  Charcoal unprocessed 10  Charcoal briquettes/pellets 11  Wood 12  Agricultural or crop residue/  grass/ straw/ shrubs/  corn cobs 13  Animal waste/dung 14  Processed biomass pellets/  briquettes 15  Woodchips 16  Garbage/plastic 17  Sawdust 18  Other 96 | Electricity (including solar  panels) ……………………….01🡪HH9  Piped natural gas ……………….02🡪HH9  LPG/ cooking gas………………..03🡪HH9  Biogas………………………………..04🡪HH9  Alcohol/ethanol…………………05🡪HH8  Gasoline/diesel (not in  generator)…………………..06🡪HH8  Kerosene/paraffin………………07🡪HH8  Coal/lignite unprocessed 08  Coal/lignite briquettes/ pellets 09  Charcoal unprocessed 10  Charcoal briquettes/pellets 11  Wood 12  Agricultural or crop residue/  grass/ straw/ shrubs/  corn cobs 13  Animal waste/dung 14  Processed biomass pellets/  briquettes 15  Woodchips 16  Garbage/plastic 17  Sawdust 18  Other 96 |
| 1. Does it have a chimney or hood? | Yes 01  No 02  Does not know 99 | Yes 01  No 02  Does not know 99 | Yes 01  No 02  Does not know 99 |
| 1. Which other fuels or energy sources are used **for heating** in this space heater, cookstove, device or fuel?   *(Circle all that respondent mentions.)* | None 01  Alcohol/ethanol 02  Gasoline/diesel (not in  generator) 03  Kerosene/paraffin 04  Coal/lignite unprocessed 05  Coal/lignite briquettes/ pellets 06  Charcoal unprocessed 07  Charcoal briquettes/pellets 08  Wood 09  Agricultural or crop residue  /grass/ straw/shrubs/  corn cobs 10  Animal waste/dung 11  Processed biomass pellets/  briquettes 12  Woodchips 13  Garbage/plastic 14  Sawdust 15  Other 96 | None 01  Alcohol/ethanol 02  Gasoline/diesel (not in  generator) 03  Kerosene/paraffin 04  Coal/lignite unprocessed 05  Coal/lignite briquettes/ pellets 06  Charcoal unprocessed 07  Charcoal briquettes/pellets 08  Wood 09  Agricultural or crop residue/  grass/ straw/shrubs/  corn cobs 10  Animal waste/dung 11  Processed biomass pellets/  briquettes 12  Woodchips 13  Garbage/plastic 14  Sawdust 15  Other 96 | None 01  Alcohol/ethanol 02  Gasoline/diesel (not in  generator) 03  Kerosene/paraffin 04  Coal/lignite unprocessed 05  Coal/lignite briquettes/ pellets 06  Charcoal unprocessed 07  Charcoal briquettes/pellets 08  Wood 09  Agricultural or crop residue/  grass/ straw/shrubs/  corn cobs 10  Animal waste/dung 11  Processed biomass pellets/  briquettes 12  Woodchips 13  Garbage/plastic 14  Sawdust 15  Other 96 |
| 1. In the past 12 months, did any harm or injury happen from using this space heater, cookstove or device? *(Circle all that respondent mentions.)* | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 |

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| **HOUSEHOLD LIGHTING** | |
| 1. Does this household use anything for lighting? | Yes………….…………..1  No………….…………...2 🡪***SKIP TO***  ***ELECTRICITY MODULE*** |
| 1. How many different *sources* of light are used in the dwelling/living quarters? | Number of sources of light…|\_\_|\_\_|  *If the respondent reports using fewer than 3 light sources in the household, leave extra columns in the following table blank. If respondent reports using more than 3 light sources, use additional sheets.* |

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|  | **a.** 1st Light Source **(MAIN)** | **b.** 2nd Light Source | **c.** 3rd Light Source |
| 1. **\***What does this household use **most of the time** as energy for lighting, or as a light source? Please tell me the light source used for the most time each day, followed by other light sources used.   *(Select one type for each light source.)* | Electricity  (including solar panels) 01  Solar-powered lantern  or flashlight 02  Rechargeable flashlight,  mobile, torch or lantern 03  Battery powered flashlight,  torch or lantern 04  Biogas lamp...................... 05  LPG lamp 06  Gasoline lamp................... 07  Kerosene/ paraffin lamp 08  Oil lamp 09  Candle 10  Open fire 11  Other 96 | Electricity  (including solar panels) 01  Solar-powered lantern  or flashlight 02  Rechargeable flashlight,  mobile, torch or lantern 03  Battery powered flashlight,  torch or lantern 04  Biogas lamp...................... 05  LPG lamp 06  Gasoline lamp................... 07  Kerosene/ paraffin lamp 08  Oil lamp 09  Candle 10  Open fire 11  Other 96 | Electricity  (including solar panels) 01  Solar-powered lantern  or flashlight 02  Rechargeable flashlight,  mobile, torch or lantern 03  Battery powered flashlight,  torch or lantern 04  Biogas lamp...................... 05  LPG lamp 06  Gasoline lamp................... 07  Kerosene/ paraffin lamp 08  Oil lamp 09  Candle 10  Open fire 11  Other 96 |
| 1. In the **past 12 months**, did any harm or injury happen from using this lighting source?   *(Circle all that respondent mentions.)* | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 | None 01  Person burned 02  Fire in house 03  Poisoning 04  Death 05  Other 96 |

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| **HOUSEHOLD** **ELECTRICITY** | |
| 1. **\***What source of electricity is used **most** of the time in this household?   *(Please circle one.)* | No electricity in household 00 🡪 **SKIP TO**  **NEXT MODULE**  (***Please customize options for each country***.)  National grid connection from (COMPANY) 01 🡪HE4  Local mini grid 02 🡪HE4  Solar home system 03  Solar lantern 04    Electric generator 05  Rechargeable battery 06  Dry cell battery / torch 07 🡪HE4  Other, specify 96 🡪HE4 |
| 1. **\***What appliances are powered using this household’s solar device/system?   *(Please circle all that apply.)* | Mobile phone charger 01  Radio 02  Television 03  Fan 04  Refrigerator 05  Electric iron 06  Cooking device 07  Other, specify 96 |
| 1. How many lightbulbs can be powered using this household’s solar device/system? | Zero 01  One 02  Two or more 03  **AFTER THIS QUESTION, SKIP TO HE5** |
| 1. Who does this household currently pay for [NAME MAIN electricity system]? | (***Please customize options for each country***.)  No one 00  Energy company/National utility 01  Pre-paid meter card seller 02  Community/village/municipality 03  Relative 04  Neighbor 05  Landlord 06  Local store 07  Utility office 08  Bank 09  Post office 10  Other……………………………..... 96 |
| 1. Are there any other sources of electricity used in this household?   (*Please circle all that apply.)* | No other sources 00  National grid connection 01  Local mini grid 02  Solar home system 03  Solar lantern ………. 04  Electric generator 05  Rechargeable battery 06  Dry cell battery / torch 07  Other 96 |
| 1. **\***In the **last 7 days**, how many hours of electricity were available **each day** on average from [NAME MAIN electricity system]? *(Maximum 24 hours.)* | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Does not know / unsure 99 |
| 1. **\***In the last 7 days, how many hours of electricity were available **each evening** on average**, from 6:00 pm to 10:00 pm from** [NAME MAIN electricity system]? *(Maximum 4 hours.)* | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Does not know / unsure 99 |
| 1. **\***In the last 7 days, how **many times** were there unscheduled outages or blackouts from [NAME MAIN electricity system]? | Number of outages or blackouts \_\_ \_\_  Don’t know / unsure 99 |
| 1. **\***What is the total duration of all the unscheduled outages or blackouts in the last 7 days? | Number of hours \_\_ \_\_  Number of minutes \_\_ \_\_  Don’t know / unsure 99 |
| 1. ***Enumerator/CAPI check: Is the household’s main source of electricity a National Grid or Local Mini Grid?***   ***If HE1 is 1 or 2, mark “Yes”*** | Yes 1  No 2 **🡪SKIP TO NEXT MODULE** |
| 1. In the last 12 months, did any of this household’s appliances get damaged because the voltage was going up and down in the [NAME MAIN electricity system from ***HE1***]? | Yes 1  No 2 |
| 1. In the **last 12 months**, did anyone using [NAME MAIN electricity system from ***HE1***] die or have permanent limb (bodily injury) damage? | Yes 1  No 2 |