

ID: | | | | | | | | | |

1. HOUSEHOLD QUESTIONNAIRE

Energy Survey
Household Questionnaire
Medium Version

English

HOUSEHOLD IDENTIFICATION			
1.	Province	CODE:	NAME:
2.	District	CODE:	NAME:
3.	Sector	CODE:	NAME:
4.	Cell	CODE:	NAME:
5.	Village	CODE:	NAME:
6.	Locality	<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> Record response code	CODE: Urban.....1 Rural.....2
7.	Household ID		
8.	Name of Household Head		
9.	Language of interview	1. Kinyarwanda 2. English	
10.	Household Head Phone Num.		
11.	GPS Coordinates of the Dwelling	a. Latitude (S) ° . ' S	b. Longitude (E) ° . ' E
INTERVIEW DETAILS			
12.	Enumerator	ID:	NAME:
13.	Supervisor	ID:	NAME:
14.	Date of Interview DD/MM/YY	/ / D D M M Y Y	
15.	Start Time	: Use 24 hour clock	
16.	Date of Second Interview DD/MM/YY	/ /	
17.	Second Interview Start Time	: Use 24 hour clock	
18.	Date of Third Interview DD/MM/YY	/ / D D M M Y Y	
19.	Third Interview Start Time	: Use 24 hour clock	

Include Introductory note

IN ORDER TO MAKE A COMPREHENSIVE LIST OF INDIVIDUALS CONNECTED TO THE HOUSEHOLD, USE THE FOLLOWING PROBE QUESTIONS: First, give me the names of all the members of your immediate family who normally live and eat their meals together here **for the last 6 months**. WRITE DOWN NAMES, SEX, AND RELATIONSHIP TO HH HEAD (Q2 - Q4). LIST HOUSEHOLD HEAD ON LINE 1. Then, give me the names of any other persons related to you or other household members who normally live and eat their meals together here. FILL IN Q2 - Q4. Are there any other persons not here now who normally live and eat their meals here? For example, household members studying elsewhere or traveling. FILL IN Q2 - Q4. Then, give me the names of any other persons not related to you or other household members, but who normally live and eat their meals together here, such as servants, lodgers, or other who are not relatives. FILL IN Q2 - Q4. **DO NOT LIST** HOUSEHELP WHO HAVE A HOUSEHOLD ELSEWHERE, AND GUESTS WHO ARE VISITING TEMPORARILY AND HAVE A HOUSEHOLD

Dear Respondent,

Thank you very much for agreeing to meet with us today. My name is from CESS. We are carrying out this survey on behalf of the Ministry of Infrastructure and World Bank through the **Second Multi-Tier Framework Survey** which aims at gathering detailed information about access to electricity and modern cooking solutions for households, productive enterprises, and community facilities. As an identified respondent on this assessment, we would like to ask you some questions about the energy for lighting and cooking. The information you are going to provide us will be kept confidential and will not be revealed to third party. Is it okay for you to continue with the interview?

Comments:

A. Household Roster

A.1	A.2	A.3	A.4	A.5	A.6	A.7	A.8	A.9	A.10	A.11	A.12
	Name First then Last Name Make a complete list of all individuals who normally live and eat their meals together in this household, starting with the head of household.	Is [NAME] male or female? 1. Male 2. Female	What is the relationship of [NAME] to the household head? 1. Head 2. Spouse 3. Child/adopted child 4. Grandchild 5. Niece/ Nephew 6. Father/Mother 7. Sister/Brother 8. Son/Daughter-in-law 9. Brother/Sister-in-law 10. Father/Mother-in-law 11. Grandfather/mother 12. Other relative 13. House help/House help's relative 14. Other non-relative	How old is [NAME]? Record "0" if infant below 1 year old. YEARS	ENUM/CAPI: Is [NAME] 5 years old or older? 1. Yes 0. No →NEXT PERSON	Has [NAME] ever attended school? 1. Yes 0. No →A.9	What is the highest grade that [NAME] has attended? 1. NONE.....1 2. Primary.....2 3. O Level.....3 4. A Level.....4 5. TVET.....5 6. Univ BSc.....6 7. Master's Degree.....7 8. PhD.....8	Enum/CAPI: Is [NAME] 12 years or older? 1. Yes 0. No →NEXT PERSON	What is [NAME]'s marital status? 1. Married monogamously with a legal certificate 2. Married monogamously without a certificate 3. Married polygamous 4. Divorced 5. Separated 6. Single 7. Widower	Was [NAME] born in Rwanda? 1. Yes 0. No	Is [NAME] a citizen of Rwanda? 1. Yes 0. No If no citizenship, indicate Stateless...111
1											
2											
3											
4											
5											

Comments:

	A.13	A.14	A.15	A.16	A.17	A.18	A.19	A.20	A.22	A.22B
Individual ID	<p><i>CAPI: If not born in the country of survey but is a citizen of the country of survey → A.13</i></p> <p><i>If not born in the country of survey and not a citizen of the country of survey → A.14</i></p> <p><i>If born in the country of survey → A.16</i></p> <p>How did [NAME] acquire the citizenship of [COUNTRY OF SURVEY]?</p> <ol style="list-style-type: none"> 1. Nationality by marriage 2. Nationality by adoption 3. Nationality by naturalization 4. Nationality by Rwandan origin 5. Recovery of Rwandan Nationality 6. Naturalized by other means (specify) 	<p>When did [NAME] arrive in Rwanda? If this person came to live in the country more than once, print the latest year</p> <p>Year</p>	<p>Reason for migration to Rwanda</p> <ol style="list-style-type: none"> 1. Employment 2. Education and Training 3. Marriage 4. Family reunification 5. Family formation 6. Forced displacement 7. Conflict/war/instability 8. Political persecution 9. Natural disaster/climate change affecting livelihood 10. Other (specify) <p>All→A20</p>	<p>Since 2012, has [NAME] been living in this district?</p> <ol style="list-style-type: none"> 1. Yes →A.20 0. No 	<p>Since when have you been living in this district? [YEAR]</p> <p><i>Record for last time in case the person was forced to flee more than once</i></p>	<p>Where were you living before moving in this area?</p> <p><i>Write the name of the district/country</i></p>	<p>Why did you move?</p> <ol style="list-style-type: none"> 1. Employment 2. Education and Training 3. Marriage 4. Family reunification 5. Family formation 6. Forced displacement 7. Conflict/war/instability 8. Political persecution 9. Natural disaster/climate change affecting the livelihood <p>555. Other (specify)</p>	<p>How frequently does [NAME] cook food for the household?</p> <p><i>Only if age>=6 and above</i></p> <ol style="list-style-type: none"> 1. Everyday 2. A few times in a week 3. Once a week 4. A few times in a month 5. Once a month 6. Never 	<p>In the last 7 days, did the household head do any work for pay, do any kind of business, farming, or other activity to generate income, even if only for one hour?</p> <ol style="list-style-type: none"> 1. Yes 0. No →A26A <p>(Enabling condition: A.4==1)</p>	<p>In which sector did the household head work in this job?</p> <ol style="list-style-type: none"> 1. Private non-farm 2. Private farm 3. Public 4. Cooperative 5. NGO (local) 6. International organization 7. Household Domestic 8. Other (specify) 9. Don't know <p>(Enabling condition: A.4==1)</p>
1										
2										
3										
4										
5										

Comments:

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A. [CONTINUATION OF A] HOUSEHOLD BUSINESS/ENTERPRISE

A.26 A	CAPI CHECK: Does this household or any member in the household own a business/enterprise activity (additional income generating activity)?		1. Yes 0. No →B.1
A.26 B	Where is this business/enterprise located?		1. Within/adjacent to your dwelling/compound 2. Within the same village/city 3. Outside of the village/city 555. Other, specify
A.27	Who are the business owners/decision-makers for the non-farm enterprise? <i>If more than one enterprise, only respond for the enterprise with the highest annual revenue</i>		Individual ID(s) from Household Roster
A.28	Enumerator: Who is responding to this section? <i>The respondent for this section should be the business owner/operator for this enterprise. If not present, the best-informed household member.</i>		Individual ID from Household Roster
A.29	In the last 12 months, in which months did this enterprise operate? <i>Multiple responses possible</i>	a. b. c. d. e. f. g. h. i. j. k.	1. January 2. February 3. March 4. April 5. May 6. June 7. July 8. August 9. September 10. October 11. November 12. December 111. All year
A.30	What is the main activity of this enterprise? <i>Do not prompt, classify based on respondent's answer</i>		1. Manufacturing (food or other processing) 2. Cottage industry/handicrafts 3. Shops/trading 4. Service (mobile phone recharge or repair/ tailoring/barber/eatery) 555. Other, specify
A.31	Which electrical appliances do you use for your activity?		1. Light 2. Television 3. Fan 4. Refrigerator 5. Radio 6. Tablet/laptop/computer 7. Mobile phone 8. Hairdryer 9. Electric sewing machine 10. Electric iron 11. Electric mill 12. No appliances 555. Other, specify 888. Don't know
A.32	How long has this enterprise been in operation for? <i>Less than 1 year indicate 1</i>		Number of years
A.33	Is this enterprise registered? (RDB/RRA)		1. Yes, with RDB/RAA 2. Yes, at Sector 3. No
A.34	What was the total revenue of this business or activity in the last month that it was operating?		Local Currency
A.35	What was the total operating cost last month, i.e. business-related expenditure, for example buying raw materials?		Local Currency
A.36	Could you please estimate the total revenue for this business or activity in a typical month , that is, a month that is		Local Currency

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	neither the busiest nor the slowest of the year?		
A.37	In a typical month, how many hours does your enterprise operate on an average day (max 24 hours) ?		Number of hours
A.38	In a typical month, how many hours does your enterprise operate between 6 pm and 6 am (max 12 hours) ?		Number of hours
A.39	Are your working hours limited by the supply of electricity in your enterprise?		1. Yes 0. No
A.40	What are the sources of electricity that you use in your enterprise? <i>Multiple response possible</i>		1. National grid 2. Mini grid 3. Electric generator 4. Solar Lantern 5. Solar Lighting System 6. Solar Home System 7. Rechargeable Battery 8. Dry-cell battery 111. No electricity → B.1
A.41	Which one of the sources mentioned in previous question is the main source of electricity for your enterprise? <i>Enabling condition (CAPI check to include main source of electricity selected among those sources of electricity in A.40)</i>		1. National grid 2. Mini-grid 3. Electric generator 4. Solar Lantern 5. Solar Lighting System 6. Solar Home System 7. Rechargeable Battery 8. Dry-cell battery
A.42	What are the most serious problems you experience with your main source of electricity for your enterprise? <i>Record up to 2 responses.</i>	a. First <input type="text"/> b. Second <input type="text"/>	1. Supply shortage/not enough hours of electricity 2. Low/high voltage problems or voltage fluctuations 3. Unpredictable interruptions 4. Unexpectedly high bills 5. High cost of electricity 6. Do not trust the supplier 7. Cannot power large appliances 8. Maintenance/service problems 9. Unpredictable bills 555. Other, specify 111. No problems
A.43	Which sources of electricity are used ONLY for the enterprise (and NOT for household use)? <i>Enabling condition (CAPI check to include selected responses from A40).</i>		1. National grid 2. Mini-grid 3. Electric generator 4. Solar Lantern 5. Solar Lighting System 6. Solar Home System 7. Rechargeable Battery 8. Dry-cell battery 111. No electricity 13. None
A.44	Other than electricity, which other sources of energy do you also use for your enterprise? <i>Multiple response possible</i>		CODE: 1. LPG/cooking gas 2. Wood purchased 3. Wood collected 4. Charcoal 5. Kerosene 6. Peat 7. Animal Waste/Dung 8. Crop Residue/Plant Biomass 9. Saw Dust 10. Biomass Briquette 11. Processed biomass (pellets)/woodchips 12. Biogas 13. Ethanol 14. Candles 15. Diesel 16. Gasoline 17. Paraffin 111. None 555. Other, specify
A.45	Is the electricity connection for the enterprise the same as for the household?		1. Yes 0. No
A.46	Does the enterprise have a separate electricity bill from household use?		1. Yes 0. No → A.54

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A.47	How are you billed for electricity for your enterprise? Read options aloud		1. Per kWh based on the meter reading 2. Fixed monthly fee 3. Pay based on lights and appliances used 4. Utility estimates consumption 555. Other, specify 111. No bill for electricity →A.54
A.48	What is the most common way to make your electricity bill payment for your enterprise?		1. Cash 2. Vouchers/tokens/pre-paid card from local store 3. Credits using mobile money 4. Pay at the utility office 5. Pay at the bank/post office 555. Other, specify
A.49	Enumerator: Ask if the respondent pays the energy company or has a record of the electricity payment, ask to see the electricity bill/invoice and use it for A.50 to A.53.	<input type="text"/>	1. Respondent has energy bill and shows it 2. Respondent has energy bill but refuses to show it or could not locate it →A.54 3. Respondent does not have an energy bill →A.54
A.50	Is the last bill charged/pre-paid monthly?		1. Yes →A.52 0. No
A.51	How many days does the last bill/pre-paid cover?		Number of days
A.52	In the last bill, how much did you spend on the electric bill for your enterprise? Calculate amount paid from the last bill.	<input type="text"/>	Local Currency Don't know.....888
A.53	In the last bill, how much electricity did your enterprise use? Calculate usage from the last bill.	<input type="text"/> kWh	Quantity in Kilowatt Hour (kWh) Don't know.....888
A.54	In a typical month, how many hours of electricity is available each day from the [MAIN SOURCE]? Max 24 hours CAPI check: Main source responses stated in A.41 (only for response code 1,2,3,4,5,6)		Hours of supply Don't know.....888
A.55	Out of [A.38 HOURS] nighttime hours during which your business usually operates, how many hours of electricity are available from the [MAIN SOURCE]?		Hours of supply Don't know.....888
A.56	In a typical week, how many unscheduled outages/blackouts does the enterprise experience?		Number of unscheduled outages/blackouts Record "0" if none →A.58
A.57	In a typical week, what is the total duration of all the unscheduled outages/blackouts?	a. Hours <input type="text"/> b. Minutes <input type="text"/>	Don't know.....888
A.58	During a typical month, what are the three main ways your business is affected by an electricity outage? (including scheduled outages) Do not prompt. Multiple responses possible.	a. <input type="text"/> b. <input type="text"/> c. <input type="text"/>	1. Had to turn customers away 2. Had to send workers home for the day without pay 3. Had to send workers home for the day with pay 4. Used more expensive alternate energy sources to run operations/ keep perishables cold 5. Wasted perishable products/discarded damaged goods 6. Machines/appliances were damaged in the process 7. Meetings/transactions were delayed 8. Stopped operations and waited for power to return 9. Not affected by typical outages 555. Other, specify
A.59	Is there a loss of revenue in a typical month due to power outages? (both scheduled and unscheduled outages)		1. Yes 0. No →A.61
A.60	Estimate the loss of revenue in a typical month due to power outages? (both scheduled and unscheduled outages)		Local currency Don't know.....888
A.61	How much was the extra costs of operating during the outage (e.g. wasted products, paid workers, running a backup generator etc.)?		Local currency Don't know.....888

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A.62	If machinery/appliances were damaged because of the [MAIN SOURCE], what were the extra costs for fixing/replacing?		Local currency Don't know.....888
A.63	What are the back-up sources for lighting for the enterprise? (<i>Multiple responses possible</i>)		1. National grid 2. Mini grid 3. Electric Generator 4. Solar Lantern 5. Solar Lighting System 6. Solar Home System 7. Rechargeable Battery 8. Kerosene lamp 9. Biogas based lamps 10. Other fossil-fuel based lighting 11. Candle 12. Dry-cell batteries 13. Pico-hydro 111. No backup sources 555. Other, specify
A.64	Interviewer/CAPi check: Is the electric generator used as a source of electricity for the enterprise? (response 3 from A.40)?		1. Yes 0. No →A.84
A.65	Is the MAIN generator for the enterprise the same as the MAIN generator for the household?		1. Yes 0. No
A.66	How many generators does your enterprise use? <i>If multiple generators, ask following questions about main generator.</i>		Number of generators Don't know.....888
A.67	Do you share this generator with other households or enterprises?		1. Yes 0. No →A.69
A.68	How many households or enterprises are sharing electricity from this generator?		Number of households Don't know.....888
A.69	Enumerator Observation: What is the capacity of the generator? <i>Read name plate of the generator.</i>		Volt /Amps (kV) Don't know.....888
A.69b	How many days per month do you typically use this generator?		Number of days Don't know.....888
A.70	How many years have you used this generator? <i>Record in years, if less than 1 year record 1</i>		Number of Years Don't know.....888
A.71	Does your enterprise own the generator?		1. Yes →A.76 0. No
A.72	Who owns the generator?		1. Other Household 2. Community organization 3. Private person/entity 555. Other, specify 888. Don't know
A.73	Do you rent the generator or use it for free?		1. Rent 2. Use for free →A.78
A.74	How do you pay for electricity services from the generator?		1. Fixed payment (per month or week) 2. Charge by number of lights/appliances 3. Charge per hour 4. Pay for fuel only →A.78 555. Other, specify
A.75	In the months that you use it, how much did you pay to use the generator each month? <i>Do not include any cost of fuel, only fee for using the GENERATOR.</i>		Local currency Don't know.....888 ALL→A.77
A.76	How much did you pay to purchase the generator?		Local currency Don't know.....888
A.77	In the last 12 months, how much did you pay for repairs/parts/maintenance of the generator?		Local currency Don't know.....888
A.78	Who does the maintenance for the generator?		1. Reseller 2. Other local shop 3. Owner 4. No one

Comments:

ID:

			555. Other, specify
A.79	What fuel is used to power the generator?		1. Diesel 2. Gasoline/petrol 555. Other, specify 888. Don't know
A.80	In the last month, what was the total quantity of fuel used to power the generator?	a. Amount <input type="text"/>	Liters Don't know.....888
A.81	Do you pay for the fuel to power the generator?		1. Yes 0. No →A.83
A.82	In the last month, how much did your enterprise spend on fuel for this generator?		Local currency Don't know.....888
A.83	In the last 12 months, did any of your appliances get damaged because the voltage was going up and down from the generator?		1. Yes 0. No 888. Don't know Skip to →B.1 if A40 < > 4,5,6
A.84	Interviewer/CAPI check: Is a solar device used as the source of electricity to the enterprise (responses 4, 5, or 6 from A.40)?		1. Yes 0. No →B.1
A.85	Is this solar device used in the enterprise the same as the one used in the household?		1. Yes →B.1 0. No

A.86	A.87	A.88	A.89
SOLAR DEVICE	How many solar products does your enterprise use? (Only for enterprise use) <i>(Ask about all devices in order of importance)</i> 1. Solar lantern.....1 2. Solar lighting system.....2 3. Solar home system.....3	How long has your business been using solar energy? In months Don't know.....888 (Enumerator check: If respondent answers in years, convert to months)	What are the solar device used for? Multiple responses possible (This is checking the appliances to determine whether the category stated in A.87 is accurate) Code 1. Lighting 2. Cell phone charging – for the enterprise 3. Cell phone charging – as a charging station 4. Operating laptop/computer/tablet 5. Operate photocopy machine/scanner 6. Providing entertainment (e.g. playing movies) 7. Refrigeration 8. Power television/DVD/Audio 9. Solar pump 10. Milling machine 11. Electric hair dryer 12. Sewing machine 13. Powering other appliances 555. Other
1			
2			
3			
4			

ID: | | | | | | | | | |

B. HOUSEHOLD CHARACTERISTICS*Interviewer Instructions: The Respondent should be the head of the household.*

#	Question	Response	Response Code
B.1	Enumerator: Record Respondent ID for this section		Individual ID from Household Roster
B.2	What is the main source of lighting in your home?		1. Electricity from REG 2. Other electricity distributors 3. Biogas 4. Generator 5. Oil Lamp 6. Firewood 7. Candle 8. Lantern (Agatadowa) 9. Solar product 10. Batteries/ bulb 11. Torch/Phone 12. Rechargeable Battery 13. Other (specify)
B.3	How many Living room suites (armchairs, couch, coffee tables) does your household own? IF none put 0. Enabling condition: only rural		Number
B.4	How many Bicycles (For home use only) does your household own? IF none put 0 Enabling condition: only rural		Number
B.5	What is the main material used for the floors of the dwelling? Record based on observation		1. Beaten earth 2. Dung hardened 3. Wooden floor 4. Clay tiles 5. Cement 6. Bricks 7. Other(specify)
B.6	At which formal institution do members of this household have an account or savings? Multiple responses possible		1. Commercial bank 2. Cooperative credit union 3. Microfinance institution 111. No one in the household holds an account or savings with a formal institution 555. Other, specify
B.7	At which informal institution do members of this household have an account or savings? Multiple responses possible		1. Group savings (rotational) 2. Group savings (one-time disbursement) 111. No one in the households holds an account or savings with an informal institution 555. Other, specify
B.8	If anyone in the household can get a loan/credit, what are the sources of credit/loans? Multiple responses possible		1. Commercial/government bank 2. Cooperative credit union 3. Microfinance institution 4. Group savings 5. State loan 6. NGO 7. Business firm 8. Employer 9. SACCO 10. Private Moneylender 11. Shop 12. Relative/friend/neighbor 13. Mobile money services 14. Cannot get a loan/credit 555. Other, specify
B.9	Does anyone in the household have a mobile money account?		1. Yes 0. No → B12
B.10	Has the household used the account in the past 90 days?		1. Yes 0. No → B12
B.11	How do you use the mobile money services in the household? (Mark all that apply)		1. Receive money from family/friends/other 2. Transfer credit to family/relatives 3. Top up credit 4. Receive NGO/State support 5. Pay for Electricity 6. Pay for Water 7. Internet top-up/credit 8. Commercial purchases 9. Insurance 10. Loan payments 11. Savings 12. Get small loans from mobile provider 555. Other, specify
B.12	Over the last 12 months has any household member raised cattle? (Enabling condition: Only for rural households)		1. Yes 0. No

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B.13	Ubudehe categories		1. Category 1 2. Category 2 3. Category 3 4. Category 4 5. Don't Know
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C. SUPPLY AND DEMAND OF ELECTRICITY*Instructions: This module should be completed by the most knowledgeable member on household electricity.**Concerted answers should be allowed.*

C.1	Enumerator: Record Respondent ID for this section	<input type="text"/>	Individual ID from Household Roster
Electricity from National Grid			
C.2	Is the household connected to the national grid?		1. Yes → C.6 0. No
C.3	What is the MAIN reason why your household is not connected to the grid? Record the MAIN reason.		1. Grid is too far from household/not available 2. Cost of initial connection is too expensive 3. Monthly fee is too expensive 4. Satisfied with current energy solution 5. Renting, Landlord decision 6. Service unreliable 7. Administrative procedure is too complicated 8. Submitted application and waiting for connection 9. Company refused to connect the household 10. Lack of political will/enabling policies for the integration of refugees in national energy planning 11. National grid or formal connection is not permitted or illegal 12. Other, specify
C.4	Do you expect to get a grid connection?		1. Yes 111. Don't expect to get grid connection → C.41 888. Don't know → C.41
C.5	How long do you think it will take to get a grid connection?		1. Up to 6 months 2. 6 months to 1 year 3. 1 year to 2 years 4. More than 2 years 5. Don't know ALL RESPONSES → C.41
C.6	How many years have you had this grid connection for? Record in years, if less than 1 year record 1	<input type="text"/>	Number of years
C.7	How much did your household pay for the grid connection fee? Refer to connection fee ONLY.	<input type="text"/>	Local currency Don't know.....888 Household was already connected.....111 → C.12
C.8	How do you connect your household internally to the grid?		1. Ready-board 2. Internal wiring 3. Both If answer to C7 is 888 or 111, skip to C12
C.9	How much did your household pay for the internal wiring fee and/or ready-board? (based on the response in C.7) Do not include the connection fee from C.7 here	<input type="text"/>	Local currency Don't know.....888
C.10	How many days after you applied for the grid connection did your household get connected? (Enumerator: Response under 24 hours should be recorded as 0)		Number of days Don't know.....888
C.11	How many weeks after you were connected were you able to use electricity in your home? (Enumerator: Response less than 1 week should be recorded as 0)		Number of weeks Don't know.....888
C.12	Who receives the payment for your electricity service?		1. Energy company 2. Pre-paid meter card seller 3. Community/village/municipality 4. Relative 5. Neighbor 6. Landlord 7. Local store 8. Utility office 9. Bank 10. Post office 111. No one → C.26 555. Other, specify
C.13	How frequently do you make your payment?		1. Weekly 2. Bi-weekly 3. Monthly 4. Every 6 months 555. Other, specify

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C.14	Does your dwelling have an electric meter?		1. Yes 0. No → C.18
C.15	Is this a pre-paid meter?		1. Yes 0. No
C.16	Does your household share the electric meter?		1. Yes 0. No → C.18
C.17	How many households are sharing the meter?		Number of Households
C.18	How are you billed for electricity? <i>Read options aloud</i>		1. Fixed monthly fee 2. Pay based on lights and appliances used 3. Utility estimates consumption 4. Self top-up based on need or capacity to pay 555. Other, specify 111. No bill for electricity
C.19	How do you pay for your electricity usage?		1. Cash 2. Vouchers/token/pre-paid card from local store 3. Credits using mobile money 4. Credit, using other ways 5. Vouchers from agency 555. Other, specify
C.20	<i>Enumerator: If the respondent pays the energy company or has a record of the electricity payment, ask to see the latest available electricity bill/invoice and use it for C.21 to C.24.</i>	<input type="text"/>	1. Respondent has energy bill and shows it 2. Respondent has energy bill but refuses to show it or could not locate it → C.25 3. Respondent does not have an energy bill → C.25
C.21	Is the last prepayment bill charged monthly?		1. Yes → C.23 0. No
C.22	How many days does the last prepayment bill cover?		Number of days
C.23	In the last bill, how much did you spend on electricity? <i>Calculate the amount paid from the last bill.</i>	<input type="text"/>	Local currency Don't Know.....888
C.24	In the last bill, how much electricity did your household consume? <i>Calculate the consumption from the last bill.</i>	<input type="text"/> kWh	Quantity in Kilowatt Hour (kWh) Don't know.....888
C.25	In a typical month, how much do you spend on electricity?		Local currency Don't know.....888
C.26	Is the quality of electricity the same all year?		1. Yes → C.28 B 2. No
C.27	What are the worst months for service from the grid? <i>Multiple responses are possible. Record all months when a household has the lowest number of hours of electricity supply.</i>	a. <input type="text"/> b. <input type="text"/> c. <input type="text"/> d. <input type="text"/> e. <input type="text"/> f. <input type="text"/> g. <input type="text"/> h. <input type="text"/> i. <input type="text"/> j. <input type="text"/> k. <input type="text"/> l. <input type="text"/>	1. January 2. February 3. March 4. April 5. May 6. June 7. July 8. August 9. September 10. October 11. November 12. December 888. Don't Know
<i>Ask respondent first about the worst months and then about a typical month for C.28 to C.32 If no seasonal changes, ask only about a typical month. Ask questions by ROW.</i>		A. WORST MONTHS	B. TYPICAL MONTH
C.28	Do you receive information about a "load-shedding" schedule (load shedding is the set hours of electricity officially NOT available from the grid or scheduled outages)?		1. Yes 0. No
C.29	How many hours of electricity are available each day and night from the grid? (max 24 hours)	<input type="text"/> hours	<input type="text"/> hours Don't know.....888
C.30	How many hours of electricity are available each evening, from 6:00 pm to 10:00 pm from the grid? (max 4 hours)	<input type="text"/> hours	<input type="text"/> hours Don't know.....888

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C.31	How many unscheduled outages/blackouts occur in a typical week?	<input type="text"/>	<input type="text"/>	Number of unscheduled outages/blackouts No unscheduled outages/blackouts.....111→C.33 Don't know.....888
C.32	What is the total duration of all the unscheduled outages/blackouts in a typical week?	a. Hours <input type="text"/> b. Minutes <input type="text"/>	c. Hours <input type="text"/> d. Minutes <input type="text"/>	Don't know.....888
C.33	What is your main back-up source of lighting during outages/blackouts of the grid (both scheduled and unscheduled)?		1. Mini-grid 2. Electric Generator 3. Solar Lantern 4. Solar Lighting System 5. Solar Home System 6. Rechargeable Battery 7. Kerosene lamp 8. Biogas based lamps 9. Other fossil-fuel-based lighting 10. Candle 11. Dry-cell batteries/rechargeable torch 12. Burning sticks or firewood 13. Mobile phone light 111. No backup sources 555. Other, specify	
C.34	What is your main back-up source of electricity for appliances (including mobile phone charging) during outages/blackouts of the grid (both scheduled and unscheduled)?		1. Mini-grid 2. Electric Generator 3. Solar Lantern 4. Solar Lighting System 5. Solar Home System 6. Rechargeable battery (e.g.: car battery) 555. Other, specify 111. No back-up source	
C.35	The last time you asked for assistance in a power failure, how many days after you contacted the power company did they come to fix the problem? <i>Enumerator: Response under 24 hours should be recorded as 0</i>		Number of days No one to ask for assistance in power company.....111	
C.36	In the last 12 months, did any of your appliances get damaged because the voltage from the grid was going up and down?	<input type="text"/>	1. Yes 0. No 888. Don't know	
C.37	What are the most serious problems you experience with your grid electricity? <i>Record up to 2 responses.</i>	a. First <input type="text"/> b. Second <input type="text"/>	1. Supply shortage/not enough hours of electricity 2. Low/high voltage problems or voltage fluctuations 3. Unpredictable interruptions 4. Unexpectedly high bills 5. High cost of electricity 6. Do not trust the supplier 7. Cannot power large appliances 8. Maintenance/service problems 9. Unpredictable bills 555. Other, specify 111. No problems	
C.38	Is your electric wiring insulated?		1. Yes 0. No 888. Don't know	
C.39	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the grid electricity?		1. Yes 0. No →C.41	
C.40	Was this injury due to faulty wiring/connection?		1. Yes 0. No	
Electricity from Mini Grid				
C.41	Is the household connected to a mini-grid?		1. Yes →C.43 0. No	
C.42	What is the MAIN reason why your household is not connected to the mini-grid? <i>Record the MAIN reason.</i>		1. No mini-grid / Mini-grid is too far from a household 2. Cost of initial connection is too expensive 3. Monthly fee is too expensive 4. Satisfied with current energy solution 5. Renting, Landlord decision 6. Service unreliable 7. Administrative procedure is too complicated 8. Submitted application and waiting for connection	

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			9. Company refused to connect the household 10. Not allowed to connect to mini-grid 555. Other, specify ALL→C.82
C.43	What is the name of the mini-grid company?		Name of company
C.44	Are you able to power all your appliances with the mini grid?		1. Yes 0. No 888. Don't know
C.45	How many years have you had this mini-grid connection? Record in years, if less than 1 year record 1		Number of years
C.46	How much did your household pay for the mini-grid connection fee? Refer to connection cost ONLY.		Local currency Don't know.....888 Fee paid by someone else/third party.....555 Household was already connected.....111→C.51
C.47	How do you connect your household internally to the mini-grid?		1. Ready-board 2. Internal wiring 3. Both
C.48	How much did your household pay for the internal wiring and/or ready board? Do not include the connection fee from C.46 here		Local currency Don't know.....888
C.49	How many days after you applied for the mini-grid connection did your household get connected? Enumerator: Response under 24 hours should be recorded as 0)		Number of days
C.50	How many weeks after you were connected were you able to use electricity in your home? (Enumerator: Response less than 1 week should be recorded as 0)		Number of weeks
C.51	Have you applied for an upgrade of service since you connected to the mini-grid?		1. Yes 0. No
C.52	Who receives the payment for your electricity service?		1. Energy company 2. Pre-paid meter card seller 3. Community/village/municipality 4. Relative 5. Neighbor 6. Landlord 7. No one →C.66 555. Other, specify
C.53	Does your dwelling have an electric meter?		1. Yes 0. No →C.57
C.54	Is this a pre-paid meter?		1. Yes 0. No
C.55	Does your household share the electric meter?		1. Yes 0. No → C.57
C.56	How many households are sharing the meter?		Number of Households
C.57	How are you billed for electricity? Read options aloud		1. Fixed monthly fee 2. Pay based on lights and appliances used 3. Utility estimates consumption 555. Other, specify 111. No bill for electricity
C.58	How do you pay for your electricity usage?		1. Cash 2. Vouchers from local store 3. Credits using mobile money 4. Credit, using other ways 555. Other, specify
C.59	Were you involved in setting the tariff for the mini-grid?		1. Yes 0. No →C.61
C.60	How were you involved in the tariff setting?		1. Community meeting 2. Contacted by mini-grid company 3. As a member of the electricity committee 4. As a member of a cooperative 555. Other, specify
C.61	Enumerator: If the respondent pays the energy company or has a record of the electricity payment, ask to see the latest available electricity bill/invoice and use it for C.62 and C.65.	<input type="text"/>	1. Respondent has energy bill and shows it 2. Respondent has energy bill but refuses to show it or could not locate it →C.66 3. Respondent does not have an energy bill → C.66Error! Reference source not found.
C.62	Is the last bill charged monthly?		1. Yes→C.64 0. No

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C.63	How many days does the last bill cover?	<input type="text"/>	Number of days	
C.64	In the last bill, how much did you spend on electricity? <i>Calculate the amount paid from the last bill.</i>	<input type="text"/>	Local currency Don't Know.....888	
C.65	In the last bill, how much electricity did your household consume? <i>Calculate the consumption from the last bill.</i>	<input type="text"/> kWh	Quantity in Kilowatt Hour (kWh) Don't know.....888	
C.66	In a typical month, how much did you spend on electricity?	<input type="text"/>	Local currency Don't know.....888	
C.67	Is the quality of electricity service the same all year?		1. Yes →C.69 0. No	
C.68	What are the worst months for service from the mini-grid? <i>Multiple responses are possible. Record all months when a household has the lowest number of hours of electricity supply.</i>	a. <input type="text"/> b. <input type="text"/> c. <input type="text"/> d. <input type="text"/> e. <input type="text"/> f. <input type="text"/> g. <input type="text"/> h. <input type="text"/> i. <input type="text"/> j. <input type="text"/> k. <input type="text"/> l. <input type="text"/>	1. January 2. February 3. March 4. April 5. May 6. June 7. July 8. August 9. September 10. October 11. November 12. December 888. Don't Know	
<i>Ask respondent first about the worst months and then about a typical month for C.28 to C.3273 If no seasonal changes, ask only about a typical month. Ask questions by ROW.</i>		1. WORST MONTHS	2. TYPICAL MONTH	
C.69	Do you receive information about a "load-shedding" schedule (load shedding is the set hours of electricity available from the mini grid)?			1. Yes 0. No 888. Don't know.....888
C.70	How many hours of electricity are available each day and night from the mini-grid? (max 24 hours)	<input type="text"/> hours	<input type="text"/> hours	Number of hours Don't know.....888
C.71	How many hours of electricity are available each evening, from 6:00 pm to 10:00 pm from the mini-grid? (max 4 hours)	<input type="text"/> hours	<input type="text"/> hours	Number of hours Don't know.....888
C.72	How many unscheduled outages/blackouts occur in a typical week?	<input type="text"/>	<input type="text"/>	Number of unscheduled outages/blackouts No unscheduled outages/blackouts.....111→C.74 Don't know.....888
C.73	What is the total duration of all the unscheduled outages/blackouts in a typical week?	a. Hours <input type="text"/> b. Minutes <input type="text"/>	c. Hours <input type="text"/> d. Minutes <input type="text"/>	Don't know.....888
C.74	What is your main back-up source of lighting during outages/blackouts of the mini-grid? (both scheduled and unscheduled outages)	1. Electric Generator 2. Solar Lantern 3. Solar Lighting System 4. Solar Home System 5. Rechargeable Battery 6. Kerosene lamp 7. Biogas based lamps 8. Other fossil-fuel based lighting 9. Candle 10. Dry-cell batteries/rechargeable torch 11. Burning sticks or firewood 12. Mobile phone light 111. No backup sources 555. Other, specify		
C.75	What is your main back-up source of electricity for appliances (including mobile phone charging) during outages/blackouts of	1. Electric generator 2. Solar Lantern 3. Solar Lighting System 4. Solar Home System		

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	the mini-grid? (both scheduled and unscheduled outages)		5. Rechargeable battery (e.g.: car battery) 6. Pico-hydro 555. Other, specify 111. No back-up source
C.76	The last time you asked for assistance, how many days after you contacted the power company did they come to fix the problem? Enumerator: Response under 24 hours should be recorded as 0		Number of days No one to ask for assistance111 Don't know...888
C.77	In the last 12 months, did any of your appliances get damaged because the voltage from the mini-grid was going up and down?	<input type="text"/>	1. Yes 0. No 888. Don't know
C.78	What are the most serious problems you experience with your mini-grid electricity? Record up to 2 responses.	a. First <input type="text"/> b. Second <input type="text"/>	1. Supply shortage/not enough hours of electricity 2. Low/high voltage problems or voltage fluctuations 3. Unpredictable interruptions 4. Unexpectedly high bills 5. High cost of electricity 6. Do not trust the supplier 7. Cannot power large appliances 8. Maintenance/service problems 9. Unpredictable bills 555. Other, specify 111. No problems
C.79	Is your electric wiring insulated?		1. Yes 0. No
C.80	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the mini-grid electricity?		1. Yes 0. No →C.82C.82
C.81	Was this injury due to faulty wiring/connection?		1. Yes 0. No

Electric Generator

C.82	In the last 12 months, did the household use a generator to supply electricity?		1. Yes 0. No →C.106
C.83	Do you share this generator with other households? Ask about the main generator.		1. Yes 0. No →C.85
C.84	How many households are sharing electricity from this generator? Ask about main generator.		Number of households Don't know.....888
C.85	Enumerator Observation: What is the capacity of the generator? Read the nameplate of the MAIN generator.		Volt Amps (kVA) Don't know.....888
C.86	In the last 12 months, in which months did you use this generator or did you use it all year? Multiple responses possible	a. <input type="text"/> b. <input type="text"/> c. <input type="text"/> d. <input type="text"/> e. <input type="text"/> f. <input type="text"/> g. <input type="text"/> h. <input type="text"/> i. <input type="text"/> j. <input type="text"/> k. <input type="text"/> l. <input type="text"/>	1. January 2. February 3. March 4. April 5. May 6. June 7. July 8. August 9. September 10. October 11. November 12. December 111. Used all year
C.87	How many days per month did you typically use this generator?		Number of days Don't know.....888
C.88	In the last 12 months, what did your household use this generator for? Multiple responses possible	a. <input type="text"/> b. <input type="text"/> c. <input type="text"/> d. <input type="text"/>	1. Lighting 2. Appliances 3. Home-based income activity 555. Other, specify 888. Don't know

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C.89	How many years have you used this generator for? Record in years, if less than 1 year record 1		Number of years Don't know.....888
C.90	In the last 12 months, how much did you pay for repairs/parts/maintenance of the generator?	<input type="text"/>	Local currency Don't know.....888
C.91	Who does the maintenance of the generator?		1. Reseller 2. Other local shopshop 3. Owner 4. No maintenance 555. Other, specify
C.92	What fuel is used to power the generator?		1. Diesel 2. Gasoline 555. Other, specify 888. Don't know
C.93	During the typical month when a generator is used, what is the total quantity of fuel used to power the generator per month on average?	Amount <input type="text"/>	Liters Don't know.....888
C.94	Do you pay for the fuel used to power the generator?		1. Yes 0. No →C.96
C.95	During the typical month when a generator is used, how much does your household spend on fuel for this generator per month on average?		Local currency Don't know.....888

C.96	Are there certain months/seasons of the year when the required amount of fuel is unavailable to power the generator?		1. Yes 0. No
C.97	How many hours can you use this generator each day and night if you want to? (max 24 hours)	<input type="text"/> hours	Number of hours Don't know.....888
C.98	How many hours can you use this generator each evening, from 6:00 pm to 10:00 pm if you want to? (max 4 hours)	<input type="text"/> hours	Number of hours Don't know.....888
C.99	How many unscheduled outages/blackouts occur in a typical week?	<input type="text"/>	Number of unscheduled outages/blackouts No unscheduled outages/blackouts.....111→C.101 Don't know.....888
C.100	What is the total duration of all the unscheduled outages/blackouts in a typical week?	a. Hours <input type="text"/> b. Minutes <input type="text"/>	Don't know.....888
C.101	In the last 12 months, did any of your appliances get damaged because the voltage from the generator was going up and down?		1. Yes 0. No 888. Don't know
C.102	What are the most serious problems you experience with the generator? Record up to 2 responses.	a. First <input type="text"/> b. Second <input type="text"/>	1. Limited power supply 2. Cannot power large appliances 3. Too expensive to use (including the high cost of fuel/rent) 4. Availability of the fuel 5. Hard to maintain/service 6. Loud/Noisy 7. Unpredictable interruptions 8. Pollution from the operation 555. Other, specify 111. No problems
C.103	Is your electric wiring insulated?		1. Yes 0. No 888. Don't know
C.104	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the generator?		1. Yes 2. No →C.106
C.105	Was this injury due to faulty wiring/connection?		1. Yes 0. No

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Externally Recharged Battery (Car Battery, etc)			
C.106	In the last 12 months, did the household use any rechargeable batteries, such as car batteries, for electricity?		1. Yes 0. No → C.127
C.107	In the last 12 months, in which months did you use rechargeable batteries, or did you use it all year? <i>Multiple responses possible</i>	a. b. c. d. e. f. g. h. i. j. k. l.	1. January 2. February 3. March 4. April 5. May 6. June 7. July 8. August 9. September 10. October 11. November 12. December 111. Used all year 888. Don't know
C.108	In the last 12 months, what did your household use rechargeable batteries for? <i>Multiple responses possible</i>	a. b. c. d.	1. Lighting 2. Appliances 3. Home-based income activity 555. Other, specify
C.109	Does your household have an inverter that allows you to use AC appliances?		1. Yes 0. No → C.111
C.110	What is the capacity of the inverter?		Watts (W)
C.111	What is the total number of rechargeable batteries that you use in a typical month?		Total number of rechargeable batteries Don't know.....888
C.112	How much did you pay for the rechargeable battery?		Local currency Don't Know.....888
C.113	How much does your household spend in a typical month to recharge the batteries (in total)?		Local currency Don't Know.....888
C.114	Where do you charge the battery?		1. In-house 2. Local shop/store → C.116 3. Neighbor → C.116 555. Other, specify → C.116
C.115	What is the electricity source used to recharge the battery?		1. National grid 2. Local mini-grid 3. Electric generator 4. Solar 555. Other, specify
C.116	How many hours can you use the rechargeable batteries for electricity supply each day if you want to? (max 24 hours)		Number of hours Don't know.....888
C.117	How many hours can you use the rechargeable batteries for electricity supply each evening, from 6:00 pm to 10:00 pm if you want to? (max 4 hours)		Number of hours Don't know.....888
C.118	How many hours do you actually use rechargeable batteries for electricity supply each day ? <i>Cannot exceed the number of hours in C.116</i>		Number of hours Don't know.....888
C.119	How many hours do you actually use rechargeable batteries for electricity supply each evening, from 6:00 pm to 10:00 pm ? <i>Cannot exceed the number of hours in C.117</i>		Number of hours Don't know.....888
C.120	What is the capacity of the rechargeable batteries? <i>If multiple batteries, record the capacity for the most used battery.</i>	Capacity	Ampere-hours Don't know.....888
C.121	What is the voltage of the rechargeable batteries? <i>If multiple batteries, record the voltage for the most used battery.</i>	Voltage	Volts Don't know.....888

Comments:

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C.122	What are the most serious problems you experience with rechargeable batteries? Record up to 2 responses.	a. First _ _ _ b. Second _ _ _	1. Supply shortage/not enough hours of electricity 2. High cost of electricity 3. Cannot power large appliances 4. Recharging is not convenient 5. Maintenance & repair is difficult 6. Cannot recharge battery to full capacity 555. Other, specify 111. No problems
C.123	Is your electric wiring insulated?		1. Yes 0. No
C.124	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the rechargeable batteries?		1. Yes 0. No → C.126
C.125	Was this injury due to faulty wiring/connection?		1. Yes 0. No
C.126	How do you dispose of batteries when out of use?		1. Shop/reseller 2. With other garbage 3. In nature 4. Sell to the household waste center 555. Other, specify

SOLAR BASED DEVICES

C.127	Interviewer/CAPI check: In the last 12 months, did the household use any solar-based devices?		1. Yes 0. No → C.171C.171C.171C.171
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C.128	C.129	C.130	C.131	C.132	C.133	C.134	C.135	C.136	C.137	C.138	C.139	C.140	C.141	C.142	C.143
SOLAR DEVICE	What are the different devices you use? (Maximum five responses) (Ask about all devices in order of importance)	Is this your main solar device? (Only allow for one response to be Yes)	What is the manufacturer and model of this [DEVICE]?	Can you charge your phone using this [DEVICE]?	How many light bulbs are powered with this [DEVICE]?	Can you power your radio using [DEVICE]?	Do you use any of these appliances with this [DEVICE]? Multiple responses are possible. (This is to identify the Solar home system)	CAPI/Interviewer: Is the response to C.135 “No appliances 111”?	In the best of your knowledge, does the system have the capacity to power any of the following:	CAPI: What is the type of solar device? (CAPI Note: The answer to this question can be different from C129, but this response will prevail since it is based on the appliances asked between C135-C137)	What is the capacity of the battery?	Does this [DEVICE] have an inverter?	How many years have you had this [DEVICE]?	Who decided to purchase/acquire this [DEVICE]?	Did you pay for this [DEVICE] or was it given for free?
	Solar Lantern...1 Solar Lighting system...2 Solar Home System ...3	1. Yes 0. No	1. International brands 2. Local brands 3. Component-based/Local3	1. Yes 0.No	NUMBER OF LIGHT BULBS	1. Yes 0.No	0. Television → C.138 1. Fan → C.138 2. Refrigerator → C.138 3. Tablet/laptop/computer → C.138 111. No appliances 555. Other, specify	1. Yes 0.No → C.138	1. Television 2. Fan 3. Refrigerator 4. Tablet/laptop/computer 555. Other, specify 5. None	1. Solar Lantern → C.141 2. Solar Lighting product 3. Solar Home System	Amp-hours (Ah)	1. Yes 0. No	NUMBER OF YEARS	MEMBER ID	1. Paid upfront → C.145 2. For free
1															
2															
3															
4															
5															

Comments:

	C.144	C.146	C.145	C.147	C.148	C.149	C.150	C.151
SOLAR DEVICE	Who gave you this [DEVICE]? 1. Local private organizations (NGO) 2. 3. Local government 4. Relative/Friend 5. Humanitarian agencies 555. Other, specify ALL → C.147	Did you pay for this [DEVICE] in installments? 1. Yes 0. No	How much did you pay for this [DEVICE] upfront? LOCAL CURRENCY	Does this [DEVICE] come with a warranty (i.e. to exchange or repair if the device does not work)? 1. Yes 0. No	How many hours do you use this [DEVICE] for lighting and other applications each day? HOURS Don't know.....888 (Cannot exceed 24 hours)	What are the most serious problems you experience with this [DEVICE]? Record up to 2 responses. 1. Duration of service too short → C.151 2. Recurrent cost related to solar device is too expensive → C.151 3. Cannot power large appliances → C.151 4. Breaks down too often 5. Maintenance and availability of spare parts 6. Quality of light → C.151 7. Battery problems 555. Other, specify → C.151 111. No problems → C.151	Is there an easily accessible service to repair or replace this [DEVICE]? CAPI check: If any of the two responses to previous question is 4 or 5, 7, ask this question 1. Yes 0. No	Who installed this [DEVICE]? Only for answers 3. SHS in C.138 1. Reseller 2. Other technician 3. Owner 4. Relative/friend 555. Other, specify
1								
2								
3								
4								
5								

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MAIN SOLAR-BASED DEVICE**Record information for the MAIN solar-based device, the device listed in C.116 C130 in the previous table.**

C.152	At the time of the purchase, was the amount you paid for your main solar device the...		1. Full amount → C.157 2. Partial amount 3. Received for free → C.157
C.153	What is the term period for the payment?		Months
C.154	What payment system do you use?		1. Mobile Pay-as-you-go 2. Other Pay-as-you go (scratch card, etc.) 3. Fixed fee
C.155	What is the monthly payment for this [DEVICE] (installment/ fee to rent/use)?		Local currency
C.156	Did/do you ever borrow money to make your payment for [DEVICE]?		1. Yes 0. No
C.157	Are there certain months/seasons every year when the service is not as strong from this [DEVICE]?		1. Yes 0. No
C.158	How many hours do you receive electricity from this [DEVICE] each day and night? (max 24 hours)	<input type="text"/> hours	Number of hours Don't know.....888
C.159	How many hours is electricity available from this [DEVICE] each evening, from 6:00 pm to 10:00 pm? (max 4 hours)	<input type="text"/> hours	Number of hours Don't know.....888
C.160	Is your electric wiring insulated?		1. Yes 0. No
C.161	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the [DEVICE]?		1. Yes 0. No → C.163
C.162	Was this injury due to faulty wiring/connection?		1. Yes 0. No
C.163	Is there any appliance that you do not own but would like to power with this [DEVICE]?		1. Yes 0. No → C.165 888. Don't know
C.164	What appliances would you like to use? Multiple response (Up to three devices).		1. Television 2. Fan 3. Refrigerator 4. Radio 5. Tablet/laptop/computer 6. Mobile phone charger 555. Other, specify 888. Don't know/refuse to answer
C.165	Overall, how satisfied are you with the service provided by the main solar device?		1. Very satisfied 2. Somewhat satisfied 3. Neutral 4. Unsatisfied 5. Very unsatisfied
C.166	In what year did you get your first solar device?		Year Don't know.....888
C.167	Has solar been your main source of lighting/electricity since [YEAR in C.166]?		1. Yes → C.169 0. No 888. Don't know
C.168	What was your main source of lighting/electricity when it was not a solar device?		1. National grid 2. Mini grid 3. Electric generator 4. Rechargeable battery (e.g.: car battery) 5. Kerosene lamp 6. Biogas based lamps 7. Other fossil-fuel based lighting 8. Dry-cell battery/Torch/Flashlight 9. Candle 10. Burning stick or firewood 11. Mobile phone light 555. Other, specify 888. Don't know
C.169	Compared to the first time you used solar lighting, do you currently... Read aloud options		1. Use more solar lighting 2. Use about the same solar lighting 3. Use less solar lighting → C.171 888. Don't know

Comments:

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C.170	What appliances do you use today that you did not use with your first solar lighting device?		1. Mobile phone charger 2. Radio 3. TV 4. Fan 5. Refrigerator 6. Additional lights 7. No change 555. Other, specify
Main Source of Electricity			
C.171	Of all the sources that you mentioned above, which is the source that you use the most in your household? <i>This will be the MAIN electricity source that is referred to later.</i> <i>Enabling condition (CAPI check should be included that main source of electricity should be selected among those sources of electricity that a household is using based on the previous sections).</i>		1. National grid 2. Mini-grid 3. Electric generator 4. Solar Lantern 5. Other Solar Lighting System 6. Solar Home System 7. Rechargeable Battery 8. Dry-cell battery 111. No electricity
CHARGING MOBILE PHONE & INTERNET			
C.172	How many mobile phones do the household members own combined?		If none input "0" → D1
C.173	Does anyone own a smart phone (not a basic feature phone with internet connection) in the household?		1. Yes 2. No
C.174	Are members of your household able to charge all their mobile phones as often as they need inside your dwelling?		1. Yes → C.177 2. No 888. Don't know
C.175	How many mobile phones of your household members do you charge outside your dwelling?		Number of mobile phones If 0 → C.177
C.176	How much does your household spend each month (in total) on charging the mobile phone(s) outside your dwelling?		Local currency
C.177	Does the household have access to internet?		1. Yes 2. No

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Main Source of Electricity**D. WILLINGNESS TO PAY FOR SOLAR DEVICE**

Section D does not get asked if the answer to D1 is 1, 2, 5, or 6. The respondent should be the most knowledgeable member on household electricity. For each household, CAPI will 1) randomly assign a Tier 2 (high capacity: enough to power a television) or Tier 1 (low capacity: multiple lightbulbs and mobile charging) solar home system; and 2) randomly one of the three following amounts in the placeholder \${CF}: 33%, 66%, or 100% of the solar device in local currency. We will have the market price for the selected.

D.1	ENUMERATOR/CAPI check: Is the main source of electricity for this household: <i>The main source of electricity is answered in C171</i>		1. National grid 2. Mini-grid 3. Electric generator 4. Solar Lantern 5. Solar Lighting product 6. Solar Home System 7. Rechargeable Battery 8. Dry-cell battery 111. No electricity
D.2	Enumerator: Record Respondent ID for this section	<input type="text"/>	Individual ID from Household Roster
<p>We will ask you questions about a solar home system. Enumerator: show picture and describe what the solar home system can and can't do and the benefits of using a solar home system. [INSERT DESCRIPTION OF SOLAR DEVICE]</p> <p>If you could pay a "lump sum" price for this solar device; in other words, you are offered a price and if you decide to buy the device, you will have to pay it all at once. As you answer the next few questions, keep in mind the various benefits from this device as well as your household budget.</p>			
D.3	Would you be willing to pay \${CF} upfront for this solar device?		1. Yes → E1 0. No
D.4	Would you be willing to pay \${CF} for this solar device, if you were given 6 months to make the payment?		1. Yes → E1 0. No 888. Don't Know
D.5	Would you be willing to pay \${CF} for this solar device, if you were given 12 months to make the payment?		1. Yes → E1 0. No 888. Don't Know
D.6	Would you be willing to pay \${CF} for this solar device, if you were given 24 months to make the payment?		1. Yes → E1 0. No 888. Don't Know
D.7	Why would you not accept the offer?		1. Cannot afford the payment 2. I already have electricity to meet my needs 3. Maintenance/servicing of device is not available 555. Other, specify

ID: | | | | | | | | | |

E. Household assets: Electrical Appliances

Item Number	Item	a. How many [ITEM] in working condition does your household own? <i>Write 0 if none</i> <i>0 <input type="checkbox"/> NEXT ROW</i>	b. Has your household used this item in the last 6 months? 1. Yes 0. No <input type="checkbox"/> NEXT ROW	c. How many hours does your household use [ITEM] in a typical day? (Only for lights, fan, radio, refrigerator and TV) Number of hours <i>If less than 1, record 1</i>
E.0	Bicycle (for home use only)			
E.1	Incandescent Light Bulb			
E.2	Fluorescent Tube			
E.3	Compact Fluorescent Light (CFL) Bulb			
E.4	LED Light Bulb			
E.5	Torch/flashlight/lantern (dry-cell)			
E.6	Radio			
E.7	Radio/CD players/sound system (without using dry-cell battery)			
E.8	VCD/DVD			
E.9	Fan			
E.10	Refrigerator			
E.11	Microwave oven			
E.13	Electric Iron			
E.14	Hair dryer			
E.15	Electric food processor/blender			
E.16	Rice cooker			
E.17	Freezer			
E.18	Washing machine			
E.20	Electric sewing machine			
E.21	Indoor Air cooler			
E.22	Air Conditioner (AC)			
E.23	Electric space heater			
E.24	Electric water heater (non solar-based)			
E.26	Computer			
E.27	Electric hot water pot/kettle			
E.28	Smartphone (internet phone) charger			
E.29	Typical mobile phone charger			
E.30	Black & White TV			
E.31	Typical Color TV			
E.32	Flat color TV			
E.33	Internet Modem/Router			
E.34	Electric mill			
E.35	Electric Water Pump (non solar-based)			
E.37	Other, specify			
E.38	How do you dispose of electrical appliances?			1. Shop/reseller 2. With other garbage 3. In nature 4. Kept at home 555. Other, specify

Comments:

F. KEROSENE/FUEL-BASED /CANDLE LIGHTING

The respondent should be most knowledgeable household member on household use of kerosene and candles.

F.1	ENUMERATOR: RECORD RESPONDENT ID FOR THIS SECTION				INDIVIDUAL ID FROM HOUSEHOLD ROSTER		
F.2	F.3	F.4	F.5	F.6	F.7	F.8	F.9
FUEL LAMP/CANDLE/TASK	In the last 12 months, did you use [NAME FROM THE LIST] for lighting? <i>Use photo aid to identify lamp type</i> 1. Candle → F.6 2. Open wick lamp 3. Hurricane lamp with glass cover 4. Pressurized mantle lamp 5. None → G.1 555. Other, specify <i>Use a separate row for each TYPE of lamp/candle</i>	What is the main fuel source for [LAMP]? 1. Kerosene 2. Diesel 3. Gasoline 4. Biogas 5. Paraffin 555. Other, specify	How many of these lamps does your household have? NUMBER OF LAMPS	In the last month, how many days did you use [LAMP/CANDLE]? NUMBER OF DAYS	How many hours do you use [LAMP/CANDLE] each day? HOURS	What are the two main problems you encounter when using [LAMP/CANDLE]? <i>Record up to 2 responses</i> 1. Lantern too expensive 2. Fuel too expensive 3. Fuel not available 4. Accidents can happen 5. Bad for health 6. Time spent to collect fuel 555. Other, specify 111. No problems	In the last 12 months, what type of harm/injury did any household members have from [LAMP/CANDLE]? <i>Multiple responses possible</i> 1. Death or permanent limb damage 2. Burns/fire 3. Poisoning 4. Eye problems 5. Respiratory problem 6. Other major injury 7. Minor injury 8. Fire with no injury 111. None
1						a. b.	
2						a. b.	
3						a. b.	
4						a. b.	
5						a. b.	

F.10	What is the main source of lighting that the children who are currently enrolled in school usually use for studying/doing homework? <i>Single response</i>		1. Electric lighting 2. Solar powered light source 3. Battery-operated light source 4. Street lighting 5. Kerosene lamp	6. Candles 7. Biogas lamps 8. Other fossil-fuel based lighting 555. Other, specify 111. No children currently enrolled in school/studying only during daylight
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Comments:

F.11	F.12	F.13	F.14	F.15	F.16
FUEL/ CANDLE ID	Fuel	What is usually the total quantity of [FUEL] the household purchases/receives at a time?	How frequently does the household purchase /receive this [FUEL]? <i>Refer to quantity in F.13 Every how many days?</i>	How much does the household spend on this [FUEL] per purchase/when you receive it? <i>Refer to quantity in F.13</i>	What percentage of this [FUEL] does the household uses for lighting versus other applications (e.g. heating, cooking)?
		LITERS OF FUEL/Number of Candles/dry cell batteries	Frequency	LOCAL CURRENCY	PERCENTAGE
1	Candle				
2	Kerosene				
3	Diesel				
4	Gasoline				
5	Biogas				
6	Paraffin				

G. USE OF COOKING SOLUTIONS

Instructions: *The respondent should be the main cook of the household (i.e. the household member who most frequently cooks food for the household)*

G.1	Enumerator: Who is the main cook for this household? Record Respondent ID for this section	Individual ID from Household Roster
G.2	How much time do you spend in cooking and other activities in the kitchen/cooking space per day?	_ _ minutes
G.2.A	Did you consume or spend money on rice over the last 7 days? (<i>All HHs</i>)	1. Yes 0. No
G.2.B	Did you consume or spend money on beef meat over the last 7 days? <i>Enabling condition: Only urban households.</i>	1. Yes 0. No

Comments:

Record information for each stove that the household uses. List each stove in a separate row of the table.

G.3	G.4	G.5	G.6	G.7	G.8	G.9	G.10	G.11	G.12	G.13
Cookstove ID	<p>In the last 12 months, which cookstove (s) did your household use for preparing meals (including cooking, making tea/coffee, boiling water, baking or other purposes)?</p> <p><i>List up to 5</i></p> <p>CODE:</p> <p>1. 3-Stones/Open fire stove →G.11</p> <p>2. Traditional/Locally built stove</p> <p>3. Manufactured biomass stove</p> <p>4. Kerosene stove</p> <p>5. LPG stove</p> <p>6. Electric stove</p> <p>7. Solar cooker</p> <p>555. Other, Specify</p>	<p>How did you obtain this [STOVE]?</p> <p>CODE:</p> <p>1. Purchased, upfront</p> <p>2. Purchased, in installment</p> <p>3. Received for free →G.8</p> <p>4. Self-built →G.10</p> <p>888. Don't know →G.10</p>	<p>Who decided to build/purchase this [STOVE]?</p> <p>\</p> <p>Member ID</p>	<p>How much was paid for [STOVE] in total?</p> <p>Don't know..888</p> <p>ALL → G.9</p>	<p>Who gave [STOVE] to you?</p> <p>CODE:</p> <p>1. Local private organizations (NGO)</p> <p>2. Chief of village</p> <p>3. Local govt</p> <p>4. Friend/ relative</p> <p>5. Humanitarian agency</p> <p>555. Other, specify</p>	<p>Did you receive training on or information about how to operate the [STOVE]?</p> <p>CODE:</p> <p>1. Yes</p> <p>0. No</p>	<p>What is the model of [STOVE]?</p> <p><i>See codes in codebook</i></p>	<p>How long have you been using [STOVE] for?</p> <p>YEARS and MONTHS</p>	<p>In the last 12 months, during which of the following months did you use [STOVE]?</p> <p>Multiple response</p> <p>CODE:</p> <p>1. January</p> <p>2. February</p> <p>3. March</p> <p>4. April</p> <p>5. May</p> <p>6. June</p> <p>7. July</p> <p>8. August</p> <p>9. September</p> <p>10. October</p> <p>11. November</p> <p>12. December</p> <p>111. Used all year</p> <p>888. Don't know</p>	<p>In the last 12 months, where did you normally cook with [STOVE]?</p> <p>CODE:</p> <p>1. In dwelling, NOT in sleeping area</p> <p>2. In dwelling, in a sleeping area</p> <p>3. In a separate kitchen</p> <p>4. In a veranda (roofed platform with at least two open sides) →G.15</p> <p>5. Outdoors →G.15</p> <p>555. Other, specify</p>
1										
2										
3										
4										
5										

Comments:

	G.14	G.15	G.16	G.17	G.18	G.19	G.20	G.21	G.22	G.23
Cookstove ID	What exhaust system, in working condition, do you use with [STOVE]?	In the last 12 months, what are the fuels you used on [STOVE]?	In the last 12 months, how often was the [FUEL TYPE] available?	How much time do household members spend preparing the [STOVE] and fuel for each meal on average [including setting up the fuel and turning on the stove but excluding gathering fuel and cooking time]?	In the last week, how many days did the household use [STOVE]?	In the last week, on average, how many times did the household light [STOVE] per day?	In the last week, on average, how much time per day did household members use [STOVE] to boil water (for washing, and drinking)?	In the last week, on average, how much time per day did household members use [STOVE] to cook or reheat meals (do not include boiling water) in the...		
	Multiple responses possible	CAPI check: This question asked only for Codes 1, 2, 3, 4 and 555 from G.4 CODE: 1. Wood purchased 2. Wood collected 3. Charcoal 4. Kerosene 5. Coal/lignite 6. Animal Waste/Dung 7. Crop Residue/Plant Biomass 8. Saw Dust 9. Charcoal Briquette 10. Biomass Briquette 11. Processed biomass (pellets)/ woodchips 12. Biogas 13. Ethanol 14. Garbage/plastic 111. Not applicable →G.17 555. Other, specify	Read aloud options CODE: 1. Always available 2. Mostly available 3. Sometimes available 4. Rarely available Skip G.16 B. if there is no 'Second Most Used' fuel in G.15B				Minutes			
	CAPI check: This question asked only for Codes 2, 3, 4 from G.4 CODE: 1. Chimney 2. Hood 3. No exhaust system 111. Other, specify	Skip G.15 B. if there is no 'Second Most Used' fuel." Not applicable response code 111 is for only G.15B. A. Most Used Single response B. Second Most Used Single response	A. Most Used B. Second Most Used	MINUTES	DAYS	NUMBER OF TIMES		MINUTES	MINUTES	MINUTES
1										
2										
3										
4										
5										

Comments:

	G.24	G.25	G.26		G.27
Cookstove ID	<p>In the last 12 months, what type of harm/injury did household members experience from [STOVE]?</p> <p>Multiple responses possible.</p> <p>CODE:</p> <ol style="list-style-type: none"> 1. Death or permanent damage 2. Burns/fire/poisoning 3. Severe cough/respiratory problem 4. Other major injury 5. Minor injury 6. Fire with no injury 7. Itchy/watery eyes 8. Light cough 9. None →G.26 	<p>What was the reason for the injury?</p> <p>CODE:</p> <ol style="list-style-type: none"> 1. Carelessness or error 2. Problem with stove 3. Stove releases high amount of smoke 555. Other, specify 	<p>Is this [STOVE] your <i>main</i> cookstove for cooking meals?</p> <p>CAPI: Only allow for one stove to be marked as "Yes"</p>		<p>Why do you not use [STOVE] most of the time?</p> <p>List up to 2 reasons</p> <p>CODE:</p> <ol style="list-style-type: none"> 1. Electricity/fuel for this stove unavailable 2. Electricity/fuel for this stove too expensive 3. Certain type of cooking is not possible with this stove 4. Cookstove does not have enough burners 5. Cookstove flame is too weak 6. Stove takes a long time to cook food 7. Electricity/fuel takes a long time to prepare 8. Stove is difficult/inconvenient to use 9. I prefer another cookstove but the electricity/fuel for that stove is too expensive or often not available 10. Certain type of meals taste better with another stove 555. Other, specify
			<p>CODE:</p> <ol style="list-style-type: none"> 1. Yes →G.28 0. No 		
1					a. b.
2					a. b.
3					a. b.
4					a. b.
5					a. b.

Item Number	Item	Of all the stoves you used in the last 12 months, which is your <i>main</i> cookstove for cooking [item]? <i>CAPI logic check: This question asked only for respondents who have more than one stove according to G.4</i> <i>Enabling condition (CAPI check should be included that the stoves listed as response options should reflect the Cookstove IDs recorded in G.4).</i> <i>Record up to 1 response for each food item.</i>
G.28	Rice, cassava flour (imyumbati/ubugali), porridge or other cereals	
G.29	Plantain, yams, potato, or other starchy staples	
G.30	Dried beans or other dried pulses (e.g., lentils)	
G.31	Groundnuts	
G.32	Cassava leaves	
G.33	Meat and meat products	

	G.34
	Of all the stoves you used in the last 12 months, which is your <i>main</i> cookstove for reheating food? <i>CAPI logic check: This question asked only for respondents who have more than one stove according to G.4</i> <i>Enabling condition (CAPI check should be included that the stoves listed as response options should reflect the Cookstove IDs recorded in G.4).</i> <i>Record up to 1 response.</i>
	[Cookstove IDs from G.4] 888 = Do not reheat foods

ENERGY EFFICIENT COOKING PRACTICES

Comments:

Item Number	Behavior	(a) Certain ways of cooking can reduce the fuel needed to cook foods. Have you heard of [Behavior]? 1. Yes 0. No -> NEXT	(b) In the last 7 days, how often did you practice [Behavior]...? 0. Never 1. Less than half the time 2. About half the time 3. More than half the time 4. Always 888. Did not cook beans in the last 7 days
G.35	Soaking beans before cooking them		0. Never 1. Less than half the time 2. About half the time 3. More than half the time 4. Always 888. Did not cook beans in the last 7 days
G.36	Using leftover hot or warm water for cooking		0. Never 1. Less than half the time 2. About half the time 3. More than half the time 4. Always 888. Did not cook any meals in the last 7 days
G.37	Cooking with a pressure cooker		0. Never 1. Less than half the time 2. About half the time 3. More than half the time 4. Always 888. Did not cook any meals with water in the last 7 days

ATTITUDES

Item Number	Statement	In the next few questions, we will ask about your attitudes related to cooking with certain stoves and fuels. When we mention ‘improved cookstoves’ – we’re talking about stoves that more efficiently use charcoal or firewood. When we mention ‘clean cookstoves’—we’re talking about stoves that use clean fuels including gas, pellets, and electricity.	
		How much do you agree with each of these statements?	
G.38	Certain food tastes better when cooked with charcoal and firewood compared to gas, pellets, or electricity.	1. Strongly Agrees 2. Agrees 3. No Opinion	4. Disagrees 5. Strongly Disagrees
G.39	Improved cookstoves that use charcoal or firewood are good for slow cooking food.	1. Strongly Agrees 2. Agrees 3. No Opinion	4. Disagrees 5. Strongly Disagrees
G.40	Clean cookstoves that use gas, pellets, or electricity are good for slow cooking food.	1. Strongly Agrees 2. Agrees 3. No Opinion	4. Disagrees 5. Strongly Disagrees
G.41	Improved cookstoves that use charcoal or firewood are too complicated for most domestic workers to use.	1. Strongly Agrees 2. Agrees 3. No Opinion	4. Disagrees 5. Strongly Disagrees
G.42	Cooking with improved cookstoves that use charcoal or firewood saves time and money.	1. Strongly Agrees 2. Agrees 3. No Opinion	4. Disagrees 5. Strongly Disagrees
G.43	Cooking with clean cookstoves that use gas, pellets, or electricity saves time and money.	1. Strongly Agrees 2. Agrees 3. No Opinion	4. Disagrees 5. Strongly Disagrees
G.44	Cooking with traditional stoves is more convenient than cooking with improved cookstoves.	1. Strongly Agrees 2. Agrees 3. No Opinion	4. Disagrees 5. Strongly Disagrees
G.45	I would worry that a domestic worker might waste fuels like gas or pellets when cooking with a clean cookstove.	1. Strongly Agrees 2. Agrees 3. No Opinion	4. Disagrees 5. Strongly Disagrees

Comments:

COOKING AREA

Enumerator: For households using any solid fuel indoors, estimate the size of the cooking space by filling the following fields. Solid fuel indoors requires the following CAPI: For G.13 responses: 1,2, or 3 & G.15 responses: 1,2,3,5,6,7,8,9,10,11,14

G.46	<i>Enumerator: based on responses to G.13 and G.15 does the HH use any solid fuels indoors?</i>		1. Yes 0. No → G.54
G.47	Do you have electric light in your cooking space?		1. Yes 0. No
G.48	Record the rough shape of the cooking space		1. Roughly square 2. Roughly rectangular 3. Roughly circular 4. Other, estimate the area in meters → G.50
G.49	Record the dimensions of the cooking space with a one-meter rod. Square, <u>record one side</u> Rectangle, <u>record both</u> sides Circle, <u>record diameter</u>		For square and circle: m For rectangle: m x m
G.50	Record the type of roof covering the cooking space		1. Flat 2. Roughly conical 3. Gable (triangular cross-section) 4. None of the above
G.51	Record the height of the highest point of the ceiling using the one-meter rod		m
G.52	How many doors and windows (opening to the outside) does the cooking space have?		Number of openings
G.53	Take a picture of the main cookstove (<i>enumerator</i>)		Picture

PREFERENCES

G.54	What are the most important factors for you when choosing a cookstove? <i>One response only</i>		1. Price 2. Fuel used 3. Cleanliness 4. Speed to cook 5. Fuel savings 6. Easy to use 7. Design/aesthetics 8. Safety 555. Other
G.55	What type of stove did you use in your place of origin? <i>Multiple responses possible</i>		1. 3-Stones/Open fire stove 2. Traditional/Locally built stove 3. Manufactured biomass stove 4. Kerosene stove 5. LPG stove 6. Piped Natural Gas stove 7. Electric stove 8. Solar cooker 555. Other, Specify 888. Not applicable

H. WILLINGNESS TO PAY FOR AN IMPROVED COOKSTOVE

Comments:

This module should be asked only to households WITHOUT an improved cookstove i.e. questions must be households that has responses 1 or 2 in G.4(CAPI/enumerator check). The respondent should be the main cook of the household (i.e. the household member who most frequently cooks food for the household), as identified in G.1

For each household, determine whether the primary fuel is wood (or crop residues), charcoal or neither (based on responses in Section G). Then randomly assign one of the four following improved cookstoves:

Fuelwood users – (1) Aspirational wood ICS available in country (2) Popular affordable wood ICS available in local market.

Charcoal users – (1) Aspirational charcoal ICS available in country (2) Popular affordable charcoal ICS available in local market.

(After a type of improved cookstove is randomly chosen, price of this type of cookstove will be assigned based on one of the three percentages of the reference price: 33%, 66% or 100%.)

H.1	CAPI/ Enumerator: Recall responses to Section I (HOUSEHOLD FUEL CONSUMPTION) and record the most frequently used fuel. If not sure, ask respondent. Read options aloud		1. HH uses more frequently fuelwood or crop residues than charcoal 2. HH uses more frequently charcoal than fuelwood or crop residues 3. HH does not use any solid biomass (no charcoal, fuelwood or crop residues) →J
H.2	Enumerator: Record Respondent ID for this section		Individual ID from Household Roster
Interview: [INSERT DESCRIPTION OF THE IMPROVED COOKSTOVE] Please, describe and explain the benefit of having ICS and the features of the assigned cookstove. This cookstove can reduce the smoke and fuel consumption significantly. Possibly, your cooking time per meal will be shortened since firepower of this cookstove is stronger than the traditional cookstove. As you answer the next few questions, keep in mind the various benefits from this device as well as your household budget.			
H.3	Would you be willing to purchase this cookstove at [CAPI: Price]?		1. Yes → I 0. No
H.4	Would you be willing to pay \${CF} for this cookstove, if you were given 6 months to make the payment?		1. Yes → I 2. No 888. Don't Know
H.5	Would you be willing to pay \${CF} for this cookstove, if you were given 12 months to make the payment?		1. Yes → I 2. No 888. Don't Know
H.6	Would you be willing to pay \${CF} for this cookstove, if you were given 24 months to make the payment?		1. Yes → I 2. No 888. Don't Know
H.7	Why would you not accept the offer?		1. Cannot afford the payment 2. Do not need an improved cookstove 3. Fuel for this stove is unreliable 555. Other, specify

I. HOUSEHOLD FUEL CONSUMPTION

The respondent should be household member who most frequently cooks food for the household as identified in H.1

First ask I.3 for all fuel types and then record the information in the following questions only for the fuel that is used.

I1.	ENUMERATOR: RECORD RESPONDENT ID FOR THIS SECTION										Individual ID from Household Roster				
I2.	I.3	I.4	I.5	I.6	I.6B	I.7	I.8	I.9	I.10	I.11	I.12	I.13	I.14	I.15	I.16
Fuel <i>Read Aloud</i>	In the last 12 months, did your household use [FUEL]? Code: 1. Yes 0. No → NEXT ROW	In the last 12 months, what did your household use [FUEL] for? READ ALOUD the options below and CHECK "✓" FOR EACH ITEM THE HOUSEHOLD USES IT FOR.								In the last 12 months, how many months did you use this [FUEL]? <i>Number of Months</i>	In the last 12 months, in which months was this [FUEL] scarce and significantly more expensive? MULTIPLE RESPONSES POSSIBLE See Month Codes 1. January 2. February 3. March 4. April 5. May 6. June 7. July 8. August 9. September 10. October 11. November 12. December 888. Don't Know 111. Available all year	How often do you or a household member purchase/collect/receive [FUEL]? 1. Daily 2. Weekly 3. Twice a week 4. Monthly 7. Other, specify	What unit do you purchase/collect/receive [FUEL] in? Kg...1 Litre ..2 Load/ Bunch----3 Other, specify4	How much do you purchase/receive each time? Quantity 0 next row	HOW MUCH DID YOU PAY ON AVERAGE FOR THE AMOUNT OF [FUEL] THAT YOU PURCHASE EACH TIME? COST (LOCAL CURRENCY)
		LIGHTING	COOKING	HEATING	COOLING	FIRE STARTER/IGNITION	BOILING WATER	HOME-BASED INCOME ACTIVITY	OTHER, SPECIFY					QUANTITY	
	I.3	I.4	I.5	I.6	I.6B	I.7	I.8	I.9	I.10	I.11	I.12	I.13	I.14	I.15	I.16
a. LPG/ cooking gas															
b. Wood Purchased															
c. Wood Collected															
d. Charcoal															
e. Solar															
f. Kerosene															
g. Piped Natural Gas															
h. Peat															
i. Animal waste/ Dung															
j. Crop Residue/ Plant Biomass															
k. Sawdust															

Comments:

l. Coal Briquette															
m. Biomass Briquette															
n. Electricity															
o. Pellets/ processed biomass/ wood chips															
p. Biogas (from animal waste or dung)															
q. Ethanol															
r. Garbage/ plastic															

#	Question	PEOPLE			
		a. Women (Age 15yrs and older)	b. Girls (Under age 15yrs)	c. Men (Age 15yrs and older)	d. Boys (Under age 15yrs)
For those using Piped natural gas and electricity (Fuel Type response “g” and “n” in I.2), we do not ask this question →J.1					
I.17	Enumerators: For each question add the total amount of minutes that all the individuals in that age and gender category spend in one day. In a typical day, how many minutes in total do [PEOPLE] spend gathering, collecting, or purchasing fuels for the household and home-based income generating activities including travel time?	____ minutes	____ minutes	____ minutes	____ minutes
I.18	What is the frequency of collection/purchase by [PEOPLE]?	1. Daily 2. Weekly 3. Bi-weekly 4. Monthly 111. Not applicable	1. Daily 2. Weekly 3. Bi-weekly 4. Monthly 111. Not applicable	1. Daily 2. Weekly 3. Bi-weekly 4. Monthly 111. Not applicable	1. Daily 2. Weekly 3. Bi-weekly 4. Monthly 111. Not applicable
I.19	In a typical day, how many minutes in total do [PEOPLE] spend on fuel preparation i.e. combined time of chopping wood, igniting wood for starter, turning on the stove	____ minutes	____ minutes	____ minutes	____ minutes

ID: | | | | | | | | | |

J. SPACE AND WATER HEATING

J.1	Do you heat water for washing (either for washing dishes and clothes or for bathing)?		1. Yes 0. No → J.4
J.2	What is the main stove you use to heat water? <i>Select one</i>		1. Electric heater/boiler → J.4 2. Electric kettle/coil → J.4 3. Electric stove → J.4 4. Piped Natural Gas stove → J.4 5. LPG/cooking gas stove → J.4 6. District heating → J.4 7. Solar stove → J.4 8. Kerosene stove → J.4 9. Same solid fuel stove used for cooking → J.4 10. Separate solid fuel stove
J.3	What is the MAIN fuel you use for heating water?		1. Firewood 2. Charcoal 3. Peat 4. Animal Waste/Dung 5. Crop Residue/Plant Biomass 6. Saw Dust 7. Coal Briquette 8. Biomass Briquette 9. Processed biomass (pellets)/ woodchips 10. Biogas 11. Ethanol 12. Garbage/plastic 555. Other, specify
J.4	Do you heat your house?		1. Yes 0. No → K2
J.5	What is the main source you use to heat your house?		1. Electric heater → K 2. Gas heater → K 3. District heating → K 4. Solar thermal system → K 5. Same solid fuel stove used for cooking → K 6. Separate solid fuel stove
J.6	What is the main fuel you use in this stove?		1. Firewood 2. Charcoal 3. Coal/lignite 4. Animal waste/Dung 5. Crop residue/Plant biomass 6. Sawdust 7. Coal briquette 8. Biomass briquette 9. Processed biomass (pellets)/woodchips 10. Biogas 11. Ethanol 12. Garbage/plastic 555. Other, specify

K. TIME USE

#	Question	PEOPLE			
		a. Women (Age 15 yrs and older)	b. Girls (Age 5-15 yrs)	c. Men (Age 15 yrs and older)	d. Boys (Age 5-15 yrs)
Enumerators: For each question add the total amount of minutes that all the individuals in that age and gender category spend in one day. In a typical day, how many total minutes did [PEOPLE] spend...					
K.1	Using space heaters (including time spent for starting the heater and time spent near it for warmth)	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes
K.2	Fuel and stove preparation along with cooking meals (not including fuel acquisition and boiling water)	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes
K.3	Caring, attending, or playing with/for younger children	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes
K.4	Helping children with school work	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes
K.5	Working outside of the house (for pay and/or self-employed)	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes
K.6	Time spent on entertainment and socializing	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes
K.7	Reading or studying for oneself	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes
K.8	Watching TV or listening to the radio for news and information	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes
K.9	Watching TV or listening to the radio for entertainment	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes	_ _ _ minutes

L. HEALTH IMPACTS

#	Question	PEOPLE				e. Young Children (Age 0-4 years)
		a. Women (Age 15 years and older)	b. Girls (Age 5- 15 years)	c. Men (Age 15 years and older)	d. Boys (Age 5- 15 years)	
L.1	Number of [PEOPLE] in your household with an illness with a cough at any time in the last month?	people (with cough) If 0 → b	people (with cough) If 0 → c	people (with cough) If 0 → d	people (with cough) If 0 → e	people (with cough) If 0 → L5
L.2	Of the [PEOPLE] who had an illness with a cough, how many went to see a doctor/clinic?	people	people	people	people	people
L.3	Of the [PEOPLE] who had an illness with a cough, how many breathed faster than usual with short, rapid breaths or had difficulty breathing?	people (with fast breathing) If 0 → b	people (with fast breathing) If 0 → c	people (with fast breathing) If 0 → d	people (with fast breathing) If 0 → e	people (with fast breathing) If 0 → L5
L.4	How many of those [PEOPLE] with short, rapid breaths or difficult breathing, experienced a problem in the chest or a blocked or runny nose?	Chest only Nose only Both chest & nose Other Don't know	Chest only Nose only Both chest & nose Other Don't know	Chest only Nose only Both chest & nose Other Don't know	Chest only Nose only Both chest & nose Other Don't know	Chest only Nose only Both chest & nose Other Don't know
L.5	Number of [PEOPLE] in your household with eye irritation or eye problems in the last month?	people	people	people	people	people

Comments:

#	Question	PEOPLE				e. Young Children (0-4 years)
		a. Women (Age >=15)	b. Girls (5- 15 years)	c. Men (Age >=15)	d. Boys (5- 15 years)	
In the last 12 months, how many [PEOPLE] in your household have experienced...						
L.6	Poisoning from liquid fuel	people	 people	people	 people	people
L.7	Burns related to cooking or heating or fuel	people If 0 →b	people If 0 →cL.9	people If 0 →dL.9	 people If 0 →e	people If 0 →L.9
L.8	Of the burns related to fuel-- Burns that required a visit to the clinic/hospital	people	 people	people	 people	people
L.9	Back or neck problems from carrying fuel for cooking/heating	people	 people	people	 people	people

M. ATTITUDES

M.1	What appliances would your household like to use that they do not currently use? <i>Up to 3 answers possible</i>	a. b. c.	1. Fan 2. Radio 3. Television 4. Refrigerator 5. Electronic Tablet 6. Computer 7. Hair clippers 8. Electric drill 9. Electric saw 10. Electric grinder 11. Phone with internet (smartphone) 555. Other, specify
M.2	Why do you not yet own one of these appliances? <i>Multiple responses possible</i>		1. Too expensive 2. No products available 3. Products require too much energy, cannot power them with my system 555. Other, specify
M.3	How satisfied are you with the service from [MAIN SOURCE OF ELECTRICITY C.171]? <i>Read aloud these options.</i>		1. Very satisfied 2. Somewhat satisfied 3. Neutral 4. Unsatisfied 5. Very unsatisfied
M.4	What community services would you mostly need electricity for?		1. Community centre 2. Streetlighting 3. Education facilities 4. Health facilities 5. Other, specify

N. WOMEN'S EMPOWERMENT

The respondent should be the female head of household or the female spouse of the household head or a female adult member of the household.

Enumerator: Record Respondent ID for this section: _____

N.1	Does any female member of the household own a bank account? Read options aloud	Code: 1. No account 2. Own account 3. Joint account (with spouse) 4. Joint account (with savings group)
Item Number	Item	N.2 Who in the household decided to purchase the following electric appliance that your household owns? (CAPI check: list appliances owned in section E) Record member ID (multiple IDs per appliance are possible) If item was not bought but inherited or given for free, enter.....999
1	Incandescent Light Bulb	
2	Fluorescent Tube	
3	Compact Fluorescent Light (CFL) Bulb	
4	LED Light Bulb	
5	Torch/flashlight/lantern (dry-cell)	
6	Radio/CD Players/sound system (using dry-cell battery)	
7	Radio/CD players/sound system (without using dry-cell battery)	
8	VCD/DVD	
9	Fan	
10	Refrigerator	
11	Microwave oven	
12	Non-Electric Iron (charcoal-based)	
13	Electric Iron	
14	Hair dryer	
15	Electric food processor/blender	
16	Rice cooker	
17	Freezer	
18	Washing machine	
19	Non-Electric sewing machine	
20	Electric sewing machine	
21	Indoor Air cooler	
22	Air Conditioner (AC)	
23	Electric space heater	
24	Electric water heater (non solar-based)	
25	Solar-based water heater	
26	Computer	
27	Electric hot water pot/kettle	
28	Smartphone (internet phone) charger	
29	Typical mobile phone charger	
30	Black & White TV	
31	Typical Color TV	
32	Flat color TV	
33	Internet Modem/Router	

Comments:

34	Electric mill	
35	Electric Water Pump (non solar-based)	
36	Solar-based water pump	
37	Other, specify	

INTERVIEW DETAILS			
1.	Enumerator	ID:	NAME:
Date of Interview DD/MM/YY	/ / D D M M Y Y		
End Time	: <i>Use 24 hour clock</i>		
Date of Second Interview DD/MM/YY	/ / D D M M Y Y		
Second Interview End Time	: <i>Use 24 hour clock</i>		
Date of Third Interview DD/MM/YY	/ / D D M M Y Y		
Third Interview End Time	: <i>Use 24 hour clock</i>		
Comments from Enumerator			