













**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	<i>Enumerator:</i> Record Respondent ID for this section	<input type="text"/>	Individual ID from Household Roster
C.2	What is the source that you use the most in your household? <i>This will be the MAIN (or hours most used) electricity source that is referred to later.</i>		National Grid Connection.....1 → <b>C.7</b> Local Mini Grid connection.....2 Electric generator.....3 Rechargeable Battery.....4 Dry-cell battery.....5 Solar Lantern.....6 Solar Multi-Light Product.....7 Solar Home System .....8 No electricity.....111
<b>Electricity from National Grid</b>			
C.3	Is the household connected to the national grid?		Yes.....1 → <b>C.7</b> No.....2
C.4	What is the MAIN reason why your household is not connected to the grid? <i>Record the MAIN reason.</i>		Grid is too far from household/not available.....1 Cost of initial connection is too expensive.....2 Monthly fee is too expensive.....3 Satisfied with current energy solution.....4 Renting, Landlord decision.....5 Service Unreliable.....6 Administrative procedure is too complicated.....7 Submitted application and waiting for connection....8 Company refused to connect the household.....9 Other, specify.....555
C.5	Do you expect to get grid connection?		Yes.....1 Don't expect to get grid connection.....111 → <b>C.40</b> Don't know.....888 → <b>C.40</b>
C.6	When do you expect to get grid connection?		Up to 6 months...1 6 months to 1 year...2 1 year to 2 years...3 More than 2 years...4 Don't know...888  <b>ALL RESPONSES → C.40</b>
C.7	How many years have you had this grid connection? <i>Record in years, if less than 1 year record 1</i> <i>CAPI: Cannot be greater than B.2, nor to the age of the respondent in A.5, nor "0"</i>	<input type="text"/>	Number of Years
C.8	How much did your household pay for the grid connection fee? <i>Refer to connection fee ONLY.</i>	<input type="text"/>	Local currency Don't know.....888 Household was already connected.....111 → <b>C.12</b>
C.9	How much did your household pay for the internal wiring fee? <i>Do not include the connection fee from C.8 here</i>	<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? <i>(Insert 0 if immediate)</i>		Number of dayson't know.....888

Comments:

C.11	How many weeks after you were connected were you able to use electricity in your home? <b>(Insert 0 if immediate)</b>		Number of weeks Don't know.....888
C.12	Who receives the payment for your electricity service?		Energy company, including pre-paid meter cards.....1 Community/village/municipality.....2 Relative.....3 Neighbor.....4 Landlord.....5 Local store .....6 Bank .....7 Post office.....8 No one.....111 → C.24 Other, specify.....555
C.13	How frequently do you make your payment?		Weekly...1 Fortnightly...2 Monthly...3 Every 6 months...4 Other, specify.....555
C.14	Does your household have an electric meter?		Yes.....1 No.....2 → C.19
C.15	What is the capacity of the meter? <i>Enumerator check the meter box or the bill</i>		Ampere
C.16	Is this a pre-paid meter?		Yes.....1 No.....2
C.17	Does your household share the electric meter?		Yes.....1 No.....2 → C.19
C.18	How many households are sharing the meter?		Number of Households
C.19	How is made the electricity billing? <i>Read options aloud</i>		Postpaid, per kWh based on electric meter reading .....1 Pre-paid, per kWh.....2 Fixed monthly fee based on the number of lights and appliances used.....3 Other, specify.....555 No bill for electricity.....111
C.20	How do you pay for your electricity usage?		Cash (pay invoice of national energy company) ....1 Cash (buy national energy company pre-paid card).....2 Bank transfer.....3 Other, specify.....555 Does not pay for electricity.....111 → C.24
C.21	<i>Enumerator: 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 C.22 and C.23 .</i>	<input type="checkbox"/>	Respondent has energy bill and shows it.....1 Respondent has energy bill but refuses to show it or could not locate it.....2 → C.24 Respondent does not have an energy bill.....3 → C.24
C.22	In the last month, how much did you spend on the electric bill? <i>Calculate amount paid from the last bill, consider all the applicable costs (electric meter rental, industrial tax, VAT, service tax...), excluding water</i>	<input type="checkbox"/>	Local Currency Don't Know.....888
C.23	In the last month 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

Comments:

			<b>All options → C.25</b>
C.24	In a typical month, how much did you spend on electricity?		Local Currency Don't Know.....888
C.25	Is the quality of electricity service the same all year?		Yes.....1 No.....2
C.26	Do you receive information about an availability schedule (fixed schedule of when there is available electricity from the grid)?		Yes.....1 No.....2
C.27	How many hours of electricity are available <b>daily (day and night)</b> from the grid? (max 24 hours)	<input type="text"/> hours	Hours of supply Don't know.....888
C.28	How many hours of electricity are available <b>each evening, from 6:00 pm to 10:00 pm</b> from the grid? (max 4 hours)	<input type="text"/> hours	Hours of supply Don't know.....888
C.29	How many hours of electricity do you <b>use</b> each day and night from the grid? <i>Cannot exceed number of available hours in C.27</i>	<input type="text"/> hours	Hours of supply Don't know.....888
C.30	How <b>many</b> outages/blackouts occur in a week?	<input type="text"/>	Number of outages/blackouts No outages/blackouts.....111 → C.32 Don't know.....888
C.31	What is the <b>average total duration</b> of all the outages/blackouts in a week?	a. Hours <input type="text"/> b. Minutes <input type="text"/>	Don't know.....888
C.32	What is your main back-up source <b>of lighting</b> during outages/blackouts of the grid?		Local mini grid connection.....1 Electric generator.....2 Rechargeable battery and storage devices (e.g.: car battery).....3 Solar Lantern.....4 Solar Multi-Light Product .....5 Solar Home System .....6 Fuel-based lighting (e.g.: oil/aida lamp) .....7 Dry-cell (rechargeable or non-rechargeable) battery/ Torch/ Flashlight.....8 Candle.....9 Other, specify.....555 No back-up source.....111
C.33	What is your main back-up source of electricity for appliances (including mobile phone charging) during outages/blackouts of the grid?		Local mini grid connection.....1 Electric Generator.....2 Rechargeable battery and storage devices (e.g.: car

Comments:

			battery).....3 Solar Lantern.....4 Solar Multi-Light Product .....5 Solar Home System .....6 Other, specify.....555 No back-up source.....111
C.34	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 can be recorded as 0</i>		Number of days No one to ask for assistance in power company.....111 Never asked for assistance.....888
C.35	In the last 12 months, did any of your appliances get damaged because the voltage was going up and down from the grid?	<input type="text"/>	Yes.....1 No.....2  Don't know.....888
C.36	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"/>	Supply shortage/not enough hours of electricity.....1 Low/high voltage problems or voltage fluctuations.....2 Unpredictable interruptions.....3 Unexpectedly high bills.....4 High cost of electricity.....5 Do not trust the supplier.....6 Cannot power large appliances.....7 Maintenance/service problems.....8 Unpredictable bills.....9 Other, specify.....555 No problems.....111
C.37	Is your electric wiring insulated or concealed?		Yes.....1 No.....2
C.38	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the grid electricity?		Yes.....1 No.....2 → C.40
C.39	What was the reason for this injury?		Carelessness or error.....1 Lack of knowledge about the use of the appliance...2 Faulty wiring/connection.....3 Other, specify.....555

**Electricity from Mini Grid**

C.40	Is the household connected to a mini-grid?		Yes.....1 No.....2 → C.77
C.41	What is the name of the local mini-grid company?		Name of company
C.42	Is there a limit for the load and/or appliances you are allowed to power from this mini-grid?		Yes.....1 No.....2 Don't Know.....888
C.43	How many years have you had this mini-grid connection? <i>Record in years, if less than 1 year record 1</i> <i>CAPI: It can not be higher than the respondent's age in A.5</i>		Number of Years
C.44	How much did your household pay for the mini-grid connection fee? <i>Refer to connection cost (but include all other possible standard service related costs included in the connection fee, such as cost of celebrating contract, inspection, meter's security deposit,</i>		Local currency  Don't know.....888 Household was already connected.....111 → C.48

Comments:

	<i>stamp duty, etc).</i>		
C.45	How much did your household pay for the internal wiring? <i>Do not include the connection fee from C.44 here (but include all other possible standard service related costs included in the connection fee, like protection mechanisms before the electric meter)</i>		Local currency Don't know.....888
C.46	How many days after you applied for the mini-grid connection did your household get connected? <b>(Insert 0 if immediate)</b>		Number of days Don't know.....888
C.47	How many weeks after you were connected were you able to use electricity in your home? <b>(Insert 0 if immediate)</b>		Number of weeks Don't know.....888
C.48	Have you applied for an upgrade of service since you connected to the mini-grid?		Yes.....1 No.....2
C.49	Who receives the payment for your electricity service?		Energy company.....1 Pre-paid meter card seller.....2 Community/village/municipality.....3 Relative.....4 Neighbor.....5 Landlord.....6 No one.....7→C.60 Other, specify.....555
C.50	Does your household have an electric meter?		Yes.....1 No.....2→C.54
C.51	Is this a pre-paid meter?		Yes.....1 No.....2
C.52	Does your household share the electric meter?		Yes.....1 No.....2→C.54
C.53	How many households are sharing the meter?		Number of Households
C.54	How is made the electricity billing? <i>Read options aloud</i>		Per kWh based on electric meter reading .....1 Pre-paid, per kWh.....2 Fixed monthly fee based on the number of lights and appliances used.....3 Other, specify.....555 No bill for electricity.....111
C.55	How do you pay for your electricity usage?		Cash.....1 Vouchers from local store.....2 Credit/Bank transfer.....3 Other, specify.....555 Does not pay for electricity.....111→C.60
C.56	Were you involved in setting the tariff for the mini-grid?		Yes.....1 No.....2→C.58
C.57	How were you involved in the tariff setting?		Community meeting.....1 Contacted by mini-grid company.....2 Member of electricity committee.....3 Member of cooperative.....4 Other, specify.....555
C.58	<i>Enumerator: 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 C.59 and C.60.</i>	<input type="checkbox"/>	Respondent has energy bill and shows it.....1 Respondent has energy bill but refuses to show it or could not locate it.....2→C.61 Respondent does not have an energy bill.....3→C.61

C.59	In the last month, how much did you spend on the electric bill? <i>Calculate amount paid from the last bill, consider all the applicable costs (electric meter rental, industrial tax, VAT, service tax...)</i>	<input type="text"/>	Local Currency Don't Know.....888
C.60	In the last month how much electricity did your household use? <i>Calculate the consumption from the last bill.</i>	<input type="text"/> kWh	Quantity in Kilowatt Hour (kWh) Don't Know.....888 <b>Any option → C.62</b>
C.61	In a typical month, how much did you spend on electricity?		Local Currency Don't Know.....888
C.62	Is the quality of electricity service the same all year?		Yes.....1 No.....2
C.63	Do you receive information about an availability schedule (fixed schedule of when there is available electricity from the grid)?		Yes.....1 No.....2
C.64	How many hours of electricity are available <b>daily (day and night)</b> from the grid? (max 24 hours)	<input type="text"/> hours	Hours of supply Don't know.....888
C.65	How many hours of electricity are available <b>each evening, from 6:00 pm to 10:00 pm</b> from the grid? (max 4 hours)	<input type="text"/> hours	Hours of supply Don't know.....888
C.66	How many hours of electricity do you <b>use</b> each day and night from the grid? <i>Cannot exceed number of available hours in C.64</i>	<input type="text"/> hours	Hours of supply Don't know.....888
C.67	How <b>many</b> outages/blackouts occur in a week?	<input type="text"/>	Number of outages/blackouts No outages/blackouts.....111 <b>→ C.69</b> Don't know.....888
C.68	What is the average <b>total duration</b> of all the outages/blackouts in a week?	c. Hours <input type="text"/> d. Minutes <input type="text"/>	Don't know.....888

C.69	What is your main back-up source of <b>lighting</b> during outages/blackouts of the mini grid?		Electric generator.....2 Rechargeable battery and storage devices (e.g.: car battery).....3 Solar Lantern.....4 Solar Multi-Light Product .....5 Solar Home System .....6 Fuel-based lighting (e.g.: oil/ <i>aida</i> lamp) .....7 Dry-cell (rechargeable or non-rechargeable) battery/ Torch/ Flashlight.....8 Candle.....9 Other, specify.....555 No back-up source.....111
C.70	What is your main back-up source of electricity <b>for appliances</b> (including mobile phone charging) during outages/blackouts of the mini-grid?		Electric generator.....1 Rechargeable battery and storage devices (e.g.: car battery).....2 Solar Lantern.....3 Solar Multi-Light Product .....4 Solar Home System .....5 Pico-hydro.....6 Other, specify.....555 No back-up source.....111
C.71	The last time you asked for assistance, how many days after you contacted power company did they come to fix the problem?		Number of days No one to ask for assistance .....111 Never asked for assistance.....888
C.72	In the last 12 months, did any of your appliances get damaged because the voltage was going up and down from the mini grid?	<input type="checkbox"/>	Yes.....1 No.....2 Don't know.....888
C.73	What are the most serious problems you experience with your mini grid electricity? <i>Record up to 2 responses.</i>	c. First <input type="text"/> d. Second <input type="text"/>	Supply shortage/not enough hours of electricity.....1 Low/high voltage problems or voltage fluctuations.....2 Unpredictable interruptions.....3 Unexpectedly high bills.....4 Too expensive.....5 Do not trust the supplier.....6 Cannot power large appliances.....7 Maintenance/service problems.....8 Unpredictable bills.....9 Other, specify.....555 No problems.....111
C.74	Is your electric wiring insulated or concealed?		Yes.....1 No.....2
C.75	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the mini grid electricity?		Yes.....1 No.....2 → <b>C.77</b>
C.76	What was the reason for this injury?		Carelessness or error.....1 Lack of knowledge about the use of the appliance...2 Faulty wiring/connection.....3 Other, specify.....555

Comments:

Electric Generator set		
C.77	In the last 12 months, did the household use a generator to supply electricity?	Yes.....1 No.....2→C.101
C.78	Do you share this generator with other households? <i>Ask about main generator.</i>	Yes.....1 No.....2→C.80
C.79	How many households are sharing electricity from this generator? <i>Ask about main generator.</i>	Number of households Don't know.....888
C.80	<i>Enumerator Observation:</i> What is the capacity of the generator? <i>Read name plate of the MAIN generator.</i>	Volt Amps (kVA) Don't know.....888
C.81	In the last 12 months, in which months did you use this generator or did you use it all year? <i>Multiple responses possible</i>	a. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> January.....1 b. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> February.....2 c. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> March.....3 d. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> April.....4 e. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> May.....5 f. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> June.....6 g. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> July.....7 h. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> August.....8 i. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> September.....9 j. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> October.....10 k. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> November.....11 l. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> December.....12 Used all year.....111
C.82	How many days per month did you typically use this generator?	Number of days Don't know.....888
C.83	In the last 12 months, what did your household use this generator for? <i>Multiple responses possible</i>	a. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Lighting.....1 b. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Appliances.....2 c. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Home-based income activity.....3 d. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Other, specify.....555 Don't know.....888
C.84	How many years have you used this generator? <i>Record in years, if less than 1 year record 1</i> <i>CAPI: It can not be higher than the respondent's age in A.5</i>	Number of Years Don't know.....888
C.85	Does your household own, rent or use for free the generator?	Own the generator...1→C.80 Rent the generator...2 Use the generator for free...3→C.80
C.86	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
C.87	In the last 12 months, how much did you pay for repairs/parts/maintenance of the generator?	Local currency Don't know.....888

Comments:

C.88	What fuel is used to power the generator?		Diesel.....1 Gasoline.....2 Other, specify.....555 Don't know.....888
C.89	In the last 30 days, what was the total quantity of fuel used to power the generator?	Amount <input type="text"/>	Liters Don't know.....888
C.90	Do you pay for the fuel used to power the generator?		Yes.....1 No.....2 → C.92
C.91	In the last 30 days, how much did your household spend on fuel for this generator?		Local currency Don't know.....888
C.92	Are there certain months/seasons of <b>the year</b> when less fuel is available to power the generator?		Yes.....1 No.....2
C.93	How many hours could you use this generator <b>each day and night</b> if you wanted to? ( <b>max 24 hours</b> )	<input type="text"/> hours	Hours of supply Don't know.....888
C.94	How many hours could you use this generator <b>each evening, from 6:00 pm to 10:00 pm</b> if you wanted to? ( <b>max 4 hours</b> )	<input type="text"/> hours	Hours of supply Don't know.....888
C.95	How many hours do you actually use this generator <b>each day</b> (day and night)? ( <b>Cannot be more than C.93</b> )	<input type="text"/> hours	Hours of supply Don't know.....888
<b>CAPI CHECK: If the response to C.2 is code 3, "Electric Generator", then continue to C.96. If Code 3, Electric Generator is not recorded, skip to C.101</b>			
C.96	In the last 12 months, did any of your appliances get damaged because the voltage was going up and down from the generator?		Yes.....1 No.....2 Don't know.....888
C.97	What are the most serious problems you experience with the generator? <i>Record up to 2 responses.</i>	a. First <input type="text"/> b. Second <input type="text"/>	Limited power supply.....1 Cannot power large appliances.....2 Too expensive to use (including high cost of fuel/rent).....3 Availability of the fuel.....4 Hard to maintain/service.....5 Loud/Noisy.....6 Unpredictable interruptions.....7 Other, specify.....555 No problems.....111
C.98	Is your electric wiring insulated or concealed?		Yes.....1 No.....2
C.99	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the generator?		Yes.....1 No.....2 → C.101

Comments:

C.100	What was the reason for this injury?		Carelessness or error.....1 Lack of knowledge about the use of the appliance...2 Faulty wiring/connection.....3 Other, specify.....555
<b>Externally Recharged Battery (Car Battery, etc)</b>			
C.101	In the last 12 months, did the household use any rechargeable batteries, such as car batteries, for electricity?		Yes.....1 No.....2 → C.119
C.102	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. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> b. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> c. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> d. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> e. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> f. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> g. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> h. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> i. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> j. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> k. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> l. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	January.....1 February.....2 March.....3 April.....4 May.....5 June.....6 July.....7 August.....8 September.....9 October.....10 November.....11 December.....12  Used all year.....111 Don't know.....888
C.103	In the last 12 months, what did your household use rechargeable batteries for? <i>Multiple responses possible</i>	a. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> b. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> c. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> d. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Lighting.....1 Appliances.....2 Home-based income activity.....3 Other, specify.....555
C.104	Does your household have an inverter that allows you to use AC appliances?		Yes.....1 No.....2 → C.106
C.105	What is the capacity of the inverter?		Watts (W)
C.106	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.107	How much did you pay for the rechargeable battery?	<input type="text"/>	Local currency Don't Know.....888
C.108	How much does your household spend in a typical month to recharge the batteries (in total)?		Local currency Don't Know.....888
C.109	What is the electricity source used to recharge the battery?		National grid.....1 Local mini-grid.....2 Electric generator.....3 Solar.....4 Other, specify.....555
C.110	How many hours can you use rechargeable batteries for electricity supply <b>daily (day and night) when fully charged</b> if you wanted to? <b>(max 24 hours)</b>		Hours Don't Know.....888
C.111	How many hours can you use rechargeable batteries for electricity supply <b>each evening, from 6:00 pm to 10:00 pm</b> if you wanted to? <b>(max 4 hours)</b>		Hours Don't Know.....888
C.112	How many hours do you actually use rechargeable batteries for electricity supply <b>daily</b> ?		Hours

Comments:

	<i>Cannot exceed number of hours in C.110</i>		Don't Know.....888
C.113	How many hours do you actually use rechargeable batteries for electricity supply <b>each evening, from 6:00 pm to 10:00 pm?</b> <i>Cannot exceed number of hours in C.111</i>		Hours Don't Know.....888
<b>CAPI CHECK: If the response to C2 code 4, "Rechargeable Battery", then continue to C.114. If Code 4, Rechargeable Battery is not recorded, skip to C.119</b>			
C.114	What is the capacity of the model of rechargeable batteries you use? <i>If multiple batteries, record capacity for the most used battery.</i>	Capacity	Ampere-hour Don't know.....888
C.115	What is the voltage of the model of rechargeable batteries you use? <i>If multiple batteries, record voltage for the most used battery.</i>	Voltage	Volts Don't know.....888
C.116	What are the most serious problems you experience with the rechargeable batteries? <i>Record up to 2 responses.</i>	a. First  _ _ _  b. Second  _ _ _	Supply shortage/not enough hours of electricity.....1 Too expensive.....2 Cannot power large appliances.....3 Recharging is not convenient.....4 Maintenance & repair is difficult.....5 Cannot recharge battery to full capacity.....6 Other, specify.....555 No problems.....111
C.117	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the rechargeable batteries?		Yes.....1 No.....2 → <b>C.119</b>
C.118	What was the reason for this injury?		Carelessness or error...1 Lack of knowledge about the use of the appliance ...2 Faulty wiring or wiring with exposed wires...3 Other, specify.....555





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

**MAIN SOLAR-BASED DEVICE***Record information for the MAIN solar-based device, the device listed in C.123 in the previous table.*

C.144	Was the amount you paid for your main solar device?		Full amount.....1 →C.123 Partial amount.....2
C.145	What is the term period for the payment?		Months
C.146	What payment system do you use?		Pre-paid.....1 Fixed fee.....2 Other.....555
C.147	What is the monthly payment for this [DEVICE] (installment/ fee to rent/use)?		Local Currency
C.148	Did/do you borrow money to make your payment for [DEVICE]?		Yes....1 No.....2
C.149	Are there certain months/seasons <b>every year</b> when the service is not as strong from [DEVICE]?		Yes.....1 No.....2
C.150	How many hours do you receive service from this [DEVICE] <b>daily (day and night)? (max 24 hours)</b>	<input type="text"/> hours	Hours of supply Don't know.....888
C.151	How many hours is service available from this [DEVICE] <b>each evening, from 6:00 pm to 10:00 pm? (max 4 hours)</b>	<input type="text"/> hours	Hours of supply Don't know.....888
C.152	How many hours do you actually use the [DEVICE] <b>each day</b> for lighting and other applications? <b>(max 24 hours)</b> <i>Cannot exceed hours in C.150</i>	<input type="text"/> hours	Hours of supply Don't know.....888
C.153	In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the [DEVICE]?		Yes.....1 No.....2 →C.123
C.154	What was the reason for this injury?		Carelessness or error...1 Lack of knowledge about the use of the appliance ...2 Faulty wiring or wiring with exposed wires...3 Other, specify.....555
C.155	Which devices/ appliances do you currently use that are fed by your solar device? <i>Multiple response</i>		Television.....1 Fan.....2 Refrigerator.....3 Radio.....4 Tablet/laptop/computer.....5 Mobile phone charger.....6 Air conditioning.....7 Other, specify.....555 No appliances.....111
C.156	Is there any device/appliance you do not have that you would like to have?		Yes.....1 No.....2 →C.158 Don't know.....888
C.157	What devices/appliances would you most like to have? <i>Multiple response (Up to three devices)</i>		Television.....1 Fan.....2 Refrigerator.....3 Radio.....4 Tablet/laptop/computer.....5 Mobile phone charger.....6 Air conditioning.....7 Other, specify.....555 Don't know/refuse to answer.....888
C.158	Overall, how satisfied with the service provided by the main solar device?		Very satisfied.....1 Somewhat satisfied.....2 Neutral.....3 Unsatisfied.....4 Very unsatisfied.....5
C.159	In what year did you get your first solar device?		Year Don't know.....888
C.160	Has solar been your main source of lighting/electricity since that year?		Yes.....1 No.....2 Don't know.....888
C.161	What was your main source of lighting/electricity when it was not a solar device?		National grid connection.....1 Local mini grid connection.....2 Electric generator.....3 Rechargeable battery and storage devices (e.g.: car

Comments:

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			battery).....4 Fuel-based lighting (for example, oil lamp, aida lamp).....5 Dry-cell (rechargeable/non-rechargeable) battery/ Torch/Flashlight.....6 Candle.....7 Other, specify.....555
C.162	Compared to the first time you used solar lighting, you currently... <i>Read aloud options</i>		Use more solar lighting.....1 Use about the same solar lighting.....2 Use less solar lighting.....3 → <b>C.123</b>
C.163	What devices/appliances do you use today that you did not use with your first solar lighting device?		Mobile phone charger.....1 Radio.....2 TV.....3 Fan.....4 Refrigerator.....5 No change.....6 Other, specify.....555

**Main Source of Electricity**

**CHARGING MOBILE PHONE**

C.164	How many mobile phones do the household members own combined?		If none input "0" → <b>D.1</b>
C.165	Are members of your household able to charge all their mobile phones as often as they need inside your dwelling?		Yes.....1 → <b>Error! Reference source not found.D.1</b> No.....2 Don't know.....888
C.166	Can you charge at least one mobile phone to full charge everyday inside your dwelling?		Yes.....1 → <b>C.168</b> No.....2
C.167	Can you charge at least one mobile phone to full charge in 3 days inside your dwelling?		Yes.....1 No.....2
C.168	How many mobile phones of your household members do you charge outside your dwelling? <i>CAPI: Cannot exceed the number in C.164</i>		Number of mobile phones <i>If 0 → D.1</i>
C.169	How much does your household spend each month (in total) on charging the mobile phone(s) outside your dwelling?		Local currency

<b>CHECKPOINT C</b>	<i>Interviewer/ CAPI:</i> <i>Should we proceed with the interview?</i>		
	Yes..... → <b>B.5</b> No..... → <b>6</b>		

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**D. WILLINGNESS TO PAY FOR A GRID CONNECTION**

*Respondent should be most knowledgeable member on household electricity.*

*For each household, CAPI will randomly assign one of the seven following amounts in the placeholder  $\{CF\}$ : 0% of the connection fee in local currency and respectively 14%, 29%, 43%, 57%, 71%, 100%. – 950 STN (single-phase connection)*

D.1	<b>Interviewer/CAPI check:</b> Is the household connected to the national grid?		Yes.....1 → <b>F.1</b> No.....2
D.2	<b>Enumerator:</b> Record Respondent ID for this section	<input type="text"/>	Individual ID from Household Roster
Electricity requires several types of payments. There are three parts to the cost of electricity: connection, wiring, and monthly use. In other words, to use electricity you need to have a wire from a meter in your house to the pole first. That is the connection. You also need to have wires to connect appliances within your house to the meter. This is the wiring. Finally, to keep using electricity you must pay for what is used and measured by the meter, or it will be turned off, this is the cost of monthly use. I would like to ask you questions only about the first cost of connecting – getting a wire from the electricity poles to a meter on your house.			
If you could pay a “lump sum” price for an electricity connection, in other words, you are offered a price and a period of time to decide whether to take this price. If you decide to take the price, you have to pay all at once, after which you are immediately connected. As you answer the next few questions, assume that all other wiring fees and monthly service fees for using electricity, once you have the connection, remain the same as they are now.			
D.3	Would you be willing to pay $\{CF\}$ upfront for an electricity connection?		Yes.....1 → <b>D.9</b> No.....2
D.4	Would you be willing to pay $\{CF\}$ for an electricity connection, if you were given 3 months to make the payment?		Yes.....1 → <b>D.9</b> No.....2 Don't Know.....888
D.5	Would you be willing to pay $\{CF\}$ for an electricity connection, if you were given 6 months to make the payment?		Yes.....1 → <b>D.9</b> No.....2 Don't Know.....888
D.6	Would you be willing to pay $\{CF\}$ for an electricity connection, if you were given 12 months to make the payment?		Yes.....1 → <b>D.9</b> No.....2 Don't Know.....888
D.7	If the connection fee were waived, would you get a grid connection?		Yes.....1 → <b>D.9</b> No.....2 Don't Know.....888
D.8	Why would you not accept the offer?		Still cannot afford the wiring costs.....1 Do not need electricity.....2 Electricity service is unreliable....3 Monthly fee is too expensive.....4 Other, specify.....555
D.9	How much do you think it would cost to do all the internal electrical wiring in your house?		Local currency Don't Know.....888
D.10	Think about the amount you would need to spend each month for electricity, not the connection fee. How much would you need to spend each month for electricity?		Local currency Don't Know.....888

ID:

**E. WILLINGNESS TO PAY FOR SOLAR DEVICE**

*Respondent should be 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.*

E.1	<b>ENUMERATOR/CAPI check:</b> Is the main source of electricity for this household:		National grid...1→F.1 Mini-grid.....2→F.1 Electric generator.....3→F.1 Solar Lantern.....4 Solar Lighting product.....5 Solar Home System.....6→F.1 Rechargeable Battery.....7 Dry-cell battery.....8 No electricity.....111
E.2	<b>Enumerator:</b> 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. <b>Enumerator: show picture and describe what the solar home system can and can't do and the benefits of using a solar home system.</b> [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>			
E.3	Would you be willing to pay $\${CF}$ upfront for this solar device?		Yes.....1→F.1 No.....2
E.4	Would you be willing to pay $\${CF}$ for this solar device, if you were given 6 months to make the payment?		Yes.....1→F.1 No.....2 Don't Know.....888
E.5	Would you be willing to pay $\${CF}$ for this solar device, if you were given 12 months to make the payment?		Yes.....1→F.1 No.....2 Don't Know.....888
E.6	Would you be willing to pay $\${CF}$ for this solar device, if you were given 24 months to make the payment?		Yes.....1→F.1 No.....2 Don't Know.....888
E.7	Why would you not accept the offer?		Cannot afford the payment.....1 Do not need electricity.....2 Maintenance/servicing of device is not available.....3 Other, specify.....555

<b>CHECKPOINT D+E</b>	<p><b>Interviewer/ CAPI:</b> <b>Should we proceed with the interview?</b> Yes.....→B.5 No.....→6</p>
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**F. OIL LAMP/FUEL-BASED LIGHTNING/CANDLES**

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

F.1		Enumerator: Indicate from the list who is the Respondent for this section					Individual ID from Household Roster		
F.2	F.3	F.4	F.5	F.6	F.7	F.8	F.9	F.10	
FUEL LAMP/ CANDLE/TASK LIGHT	In the last 12 months, did you use [NAME FROM THE LIST] for lightning? <i>Use photo aid to identify lamp type</i>  Candle.....1→G.1 Oil lamp (“cafuca”).....2 Hurricane lamp with glass cover (“aida”).....3 Pressurised paraffin lamp (like “petromax”).....4 None.....5→G.1 Other, specify...555  <i>Use a separate row for each TYPE of lamp/candle</i>	What is the main fuel source for [LAMP]?      Oil.....1 Diesel.....2 Gasoline.....3 Biogas.....4 Paraffin.....5 Other, specify.....555	How many of these lamps does your household have?      NUMBER OF LAMPS	How much did you pay for each [LAMP]?      <i>If paying in installment, enter total value of payments</i>  LOCAL CURRENCY      <i>If more than 1 device, input the average.</i>	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 don't you like most about using the [LAMP/CANDLE]? <i>Record up to 2 responses</i>      Lantern too expensive.....1 Fuel too expensive.....2 Fuel not available.....3 Accidents can happen.....4 Bad for health.....5 Subsidies needed.....6 Time spent to collect fuel...7 Other, specify.....555 No problems.....111	In the last 12 months, what type of harm/injury did any household members have from [LAMP/CANDLE]? <i>Multiple responses possible</i>      Death or permanent limb damage.....1 Burns/fire.....2 Poisoning.....3 Eye problems.....4 Respiratory problem.....5 Other major injury.....6 Minor injury.....7 Fire with no injury.....8 None.....111	
1							a. <input type="text"/> b. <input type="text"/>		
2							a. <input type="text"/> b. <input type="text"/>		
3							a. <input type="text"/> b. <input type="text"/>		
4							a. <input type="text"/> b. <input type="text"/>		
5							a. <input type="text"/> b. <input type="text"/>		





**H. HOUSEHOLD FUEL CONSUMPTION - FOR COOKING ONLY**

*Respondent should be household member who most frequently cooks food for the household.*

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

H.1	Enumerator: Indicate from the list who is the Respondent for this section										Individual ID from Household Roster						
H.2	H.3	H.4	H.5	H.6	H.7	H.8	H.9	H.10	H.11	H.12	H.13	H.14	H.15	H.16	H.17	H.18	
Fuel Type	In the last 12 months, did your household use this [FUEL]? CODE: Yes...1 No...2→ <b>NEXT ROW</b>	In the last 12 months, what did your household use [FUEL] for? <b>READ ALOUD the options below and Mark "X" for each item the household uses it for.</b>							In the last 12 months, how many months did you use this [FUEL]?	In the last 12 months, in which months was this [FUEL] scarce and significantly more expensive? <i>Multiple responses possible</i> <b>See Month Codes</b>	What unit do you usually purchase/collect [FUEL]?	How often do you purchase/collect [FUEL]?(in days)	How much do you purchase each time?	What was the price (per unit) that you paid?	In the last 30 days, how much did you pay for the amount of [FUEL] that you purchased?	Of the total household consumption, how much comes from purchases (not collected)?	
		LIGHTING	COOKING	HEATING	FIRE STARTER/IGNITION	BOILING WATER	HOME-BASED INCOME ACTIVITY	OTHER, SPECIFY	Number of Months Used all year.....1 11	Available all year.....111	Options: Bunch ... 1 50kg bag ... 2 5kg bag ... 3 10kg bag ... 4 5 STD Bunch ... 6 10 STD Bunch ... 7 Kilogram (kg) ... 8 Firewood Truck / Dyna ... 9 Large gas bottle 25kg ... 10 Medium gas bottle 13 kg ... 1 Small gas bottle 6kg ... 12 Half bottle (0.33 liter) ... 13 Half Liter (0.5 liter) ... 14 0.75 liter bottle ... 15 1 liter bottle ... 16 5 liter bottle... 17 25 liter canister ... 18 50 liter canister ... 19 100 liter canister... 20 200 liter canister... 21 kWh ... 22 Other, specify ... 888	QUANTITY <b>0→ NEXT ROW</b>	QUANTITY <b>0→ NEXT ROW</b>	COST (LOCAL CURRENCY)	<b>CAPI: CALCULATE AUTOMATICALLY</b>		
a. LPG/ cooking gas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> kg	<input type="checkbox"/> kg	<input type="checkbox"/>			
b. Purchased wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> kg	<input type="checkbox"/> kg	<input type="checkbox"/>			
c. Collected wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> kg	<input type="checkbox"/>	<input type="checkbox"/>			
d. Charcoal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> kg	<input type="checkbox"/> kg	<input type="checkbox"/>			
e. Petroleum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Comments:

													liters	liters			
f. Crop Residues/ Plant Biomass													kg	kg			
g. Sawdust													kg	kg			
h. Coal Briquette													kg	kg			
i. Biomass Briquette													kg	kg			
j. Electrical energy																	
k. Pellets/ processed biomass/ wood chips													kg	kg			
l. Biogas (from animal waste or dung)													kg	kg			
m. Garbage/ plastic																	
n. Other, specify																	
o. None 111																	

#	Question	PEOPLE			
		a. Women (Age 15 yrs and older)	b. Girls (Under age 15 yrs)	c. Men (Age 15 yrs and older)	d. Boys (Under age 15 yrs)
For codes "b. Wood purchased" and "c. Wood collected" ask questions H.19 -H21					
H.19	<p><b>Enumerators: For each question add the total amount of minutes that all the individuals in that age and gender category spend in one day.</b></p> <p>In a typical day, how many total minutes did [PEOPLE] spend gathering, collecting or purchasing fuels including travel time for the household and income generating activities</p>	minutes	minutes	minutes	minutes
H.20	What is the frequency of collection/purchase (i.e., in every X days)?				
H.21	How many times did [PEOPLE] collect/purchase during this period?				

Comments:







	I.26	I.27	I.28	I.29	I.30	I.31	I.32	I.33	I.34
Cookstove ID	In the last 7 days, on average, how much time did your household use [STOVE] per day to boil water (for cooking, washing, and drinking)?  <b>Minutes</b>	Do you also use [STOVE] for space heating?  <b>CODE:</b> Yes.....1 No.....2 → <b>I.30</b>	In the last 12 months, during which of the following months did you use [STOVE] for heating? <b>Multiple response</b>  <b>CODE:</b> January.....1 February.....2 March.....3 April.....4 May.....5 June.....6 July.....7 August.....8 September...9 October.....10 November...11 December....12 Used all year.....111	In a typical month, how many hours do you use [STOVE] for heating each day?  <b>NUMBER OF HOURS</b>	In the last 12 months, what type of harm/injury did your household face from [STOVE]? <b>Multiple responses possible.</b>  <b>CODE:</b> Death or permanent damage.....1 Burns/fire/poisoning.....2 Severe cough/respiratory problem...3 Other major injury.....4 Minor injury.....5 Fire with no injury.....6 Itchy/watery eyes.....7 Light cough.....8 None.....9 → <b>I.32</b>	What was the reason for the injury?  <b>CODE:</b> Carelessness or error...1 Lack of knowledge about the use of the device.....2 Defective wiring and / or connection.....3 Other, specify...555	Do you use this [STOVE] most of the time?  <b>CODE:</b> Yes.....1 → <b>I.36</b> No.....2	Why do you not use [STOVE] most of the time? <b>List up to 2 reasons</b>  <b>CODE:</b> Electricity/fuel for this stove unavailable.....1 Electricity/fuel for this stove too expensive.....2 Certain type of cooking is not possible with this stove.....3 Cookstove does not have enough burners.....4 Cookstove flame is too weak...5 Stove takes a long time to cook food.....6 Electricity/fuel takes a long time to prepare.....7 Stove is difficult/inconvenient to use.....8 I prefer another energy source but the electricity/fuel is too expensive or often not available.....9 Certain type of meals taste better with another stove.....10 Other, specify.....555	Is this [STOVE] is your <b>main</b> cookstove? <b>CAPI: Only allow for one stove to be marked as Yes</b>  <b>CODE:</b> Yes.....1 No.....2
	<b>1</b>							a. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> b. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
	<b>2</b>							a. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> b. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
	<b>3</b>							a. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> b. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
	<b>4</b>							a. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> b. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
	<b>5</b>							a. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> b. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	

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**COOKING AREA**

<i>Enumerator: For households using any solid fuel, estimate the size of the cooking space by filling the following fields.</i>		
I.35	What is the main source of energy the household uses for cooking?	Charcoal.....1 Wood.....2 Oil.....3 Gas.....4 Electricity.....5 Other.....6
I.36	<i>Enumerator: based on responses to I.15 and I.18 does the HH use any solid fuels indoors?</i>	Yes.....1 No.....2 → I.41 Don't Know.....888 → I.41
I.37	Record the rough shape of the cooking space	Roughly square.....1 Roughly rectangular.....2 Roughly circular.....3
I.38	Record the dimensions of the cooking space in heel-to-toe paces or in other measurement units.  Square, record one side Rectangle, record both sides Circle, record diameter	paces x         paces
I.39	Record the type of roof covering the cooking space	Flat.....1 Roughly Conical.....2 Gable (triangular cross-section).....3 None of the above.....4 → I.41
I.40	Estimate the height of the highest point of the ceiling relative to your own height	Higher than me.....1 My height.....2 1.5 x my height.....3 2 x my height.....4 More than 2 x my height.....5
I.41	<i>ASK about the ventilation structure or make an OBSERVATION: Assessment of ventilation structure</i>	Open air .....1 Veranda or a hood is used to extract the smoke...2 Significant openings below or above height of the door...3 More than one window....4 Only 1 window....5 No opening except for the door...6
I.42	In a typical day, how many minutes does the main cook spend in the cooking area for cooking (meals, tea, boiling water) or other activities?	Minutes

<b>CHECKPOINT I</b>	<p><i>Interviewer/ CAPI:</i> <i>Should we proceed with the interview?</i> Yes.....→B.5 No.....→6</p>
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**J. SPACE AND WATER HEATING**

J.1	Do you heat water for washing (either for washing dishes and clothes or for bathing)?	Yes.....1 No.....2 → J.4
J.2	What is the main source you use to heat water? <i>Select one</i>	Electric heater/boiler.....1 → J.4 Electric kettle/coil.....2 → J.4 Electric stove.....3 → J.4 Gas heater.....4 → J.4 Gas stove.....5 → J.4 Solar thermal system.....6 → J.4 Same solid fuel stove used for cooking.....7 → J.4 Separate solid fuel stove.....8
J.3	What is the MAIN fuel you use in this stove?	LPG/cooking gas.....1 Wood purchased.....2 Wood collected.....3 Charcoal.....4 Other Crop Residue/Plant Biomass.....5 Sawdust.....6 Coal Briquette.....7 Biomass Briquette.....8 Electric.....9 Processed biomass (pellets)/ woodchips.....10 Other, specify.....555
J.4	Do you heat your house?	Yes.....1 No.....2 → K.1

Comments:

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J.5	What is the main source you use to heat your house?		Electric heater.....1 →K.1 Gas heater.....2 →K.1 Solar thermal system.....3 →K.1 Same solid fuel stove used for cooking..... →K.1 Separate solid fuel stove.....5
J.6	What is the MAIN fuel you use in this stove?		LPG/cooking gas.....1 Purchased wood.....2 Collected wood.....3 Charcoal.....4 Other Crop Residue/Plant Biomass.....5 Sawdust.....6 Coal Briquette.....7 Biomass Briquette.....8 Electrical energy.....9 Processed biomass (pellets)/ woodchips.....10 Other, specify.....555

**K. Household assets: Leisure and Transport Equipments**

Item Number	Item	a. How many [ITEM] does your household own?  <i>Write 0 if none</i> <i>0 →NEXT ROW</i>	b. How many hours does your household use [ITEM] in a typical day? (Only for lights, fan, radio and TV)  <b>Number of hours</b>
K.1	Incandescent Light Bulb		
K.2	Fluorescent Tube		
K.3	Compact Fluorescent Light (CFL) Bulb		
K.4	LED Light Bulb		
K.5	Torch/flashlight/ lantern		
K.6	Sound system		
K.7	Radio		
K.8	CD Players		
K.9	VCD/DVD		
K.10	Recording camera		
K.11	Camera		
K.12	Fan		
K.13	Oil/charcoal stove		
K.14	Gas/electric stove		
K.15	Refrigerator/Combined and simple		
K.16	Freezer		
K.17	Microwave oven		
K.18	Electric Iron		
K.19	Washing machine		
K.20	Sewing machine		
K.21	Air Conditioner (AC)		
K.22	Space Heater		
K.23	Water heater		
K.24	Solar based water heater		
K.25	Computer, without internet connection		
K.26	Computer, with internet connection		
K.27	Electric hot water pot/kettle		
K.28	Smartphone (mobile phone with internet) charger		
K.29	Regular mobile phone charger		
K.30	TV		
K.31	Parabolic antenna		
K.32	Flat color TV		
K.33	Electric Water Pump		

Comments:

ID:

K.34	Telephone		
K.35	Mobile phone		
K.36	Other device, specify		
K.37	Bicycle		
K.38	Bike/Scooter		
K.39	Motorcycle		
K.40	Light/MIXED vehicle		
K.41	Other means of transport, specify		

**L. STREET LIGHTING**

*The respondent should be the most knowledgeable household member on household electricity, as identified in C.1*

L.1	<b>Enumerator:</b> Indicate from the list who is the Respondent for this section		Record ID from the Household Roster
L.2	Does your neighborhood have any form of street lighting? <i>“Neighborhood” means 500m from the household</i>		Yes.....1 No.....2 → <b>M.1</b>
L.3	Is the street lighting used at night?		Yes.....1 No.....2

<b>CHECKPOINT J, K, L</b>	<p><i>Interviewer/ CAPI:</i> Should we proceed with the interview? Yes..... → <b>B.5</b> No..... → <b>6</b></p>
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**M. TIME USE**

#	Question	PEOPLE			
		a. Women (Age 15 yrs and older)	b. Girls (Younger than 15 yrs)	c. Men (Age 15 yrs and older)	d. Boys (Younger than 15 yrs)
<p><b>Enumerators:</b> For each question add the total amount of minutes that all the individuals in that age and gender category spend in one day. Enter “999” if non-applicable.  <b>In a typical day, how many minutes did [PEOPLE] spend...</b></p>					
M.1	Preparing fuel/energy source (chopping, making pellets)	_____ minutes	_____ minutes	_____ minutes	_____ minutes
M.2	Cooking (food, tea, boiling water)	_____ minutes	_____ minutes	_____ minutes	_____ minutes
M.3	Other time spent in cooking area(s)	_____ minutes	_____ minutes	_____ minutes	_____ minutes
M.4	Using space heaters (including time starting heater and spending time near it for warmth)	_____ minutes	_____ minutes	_____ minutes	_____ minutes
M.5	Using stove or space heaters for other purposes (ex: producing spirit, preparing fodder for animals)	_____ minutes		_____ minutes	
M.6	Caring, attending, or playing with/for younger children	_____ minutes		_____ minutes	
M.7	Helping children with school work	_____ minutes		_____ minutes	
M.8	Working outside of the house (for pay and/or self-employed)	_____ minutes		_____ minutes	
M.9	Income generating activities inside the house	_____ minutes		_____ minutes	
M.10	Time spent on entertainment and socializing	_____ minutes		_____ minutes	
M.11	Reading or studying for oneself		_____ minutes		_____ minutes
M.12	Watching TV or listening to the radio for news and information	_____ minutes		_____ minutes	
M.13	Watching TV or listening to the radio for entertainment	_____ minutes		_____ minutes	

Comments:





**P. HOUSEHOLD LAND OWNERSHIP AND OTHER ASSETS**

*Instruction: Enter the total values of following assets owned by the household. If some assets are owned by members, report aggregate values for all members. The Respondent should be the head of household.*

	Type of land and other assets	a. Do you own [LAND TYPE]? Yes.....1 No.....2 →next row	b. What is the unit the land is measured in? Hectare...1 Sq meter...2 Other...3	c. What is the total size of the land? AMOUNT
P.1	Agricultural land (including cultivated land, resting land, preparation land and others like land for animal food)			
P.2	Pastoral land (used to graze animals)			

<b>CHECKPOINT P</b>	<p><i>Interviewer/ CAPI:</i> <i>Should we proceed with the interview?</i> Yes..... →<b>B.5</b> No..... →<b>6</b></p>

ID:

**Q. ATTITUDES**

Q.1	<i>Interviewer/CAPI check:</i> Does the household have a connection to the national grid or a mini-grid?		Yes.....1 No.....2 → Q.6
Q.2	How has the price of electricity changed over time? <i>Read options aloud (Do not read option "Don't know" aloud, type 888 if relevant.)</i>		It has gotten much higher.....1 Stayed about the same.....2 It has gotten cheaper.....3 Don't know.....888
Q.3	How has the frequency of black out or brown out changed over time? <i>Read options aloud (Do not read option "Don't know" aloud, type 888 if relevant.)</i>		It has gotten worse.....1 Stayed the same.....2 Better.....3 Don't know.....888
Q.4	How has the duration of electricity supply at night changed over? <i>Read options aloud (Do not read option "Don't know" aloud, type 888 if relevant.)</i>		It has gotten worse.....1 Stayed the same.....2 Better.....3 Don't know.....888
Q.5	Since you first received your electricity connection, how has the duration of electricity supply during the day changed? <i>Read options aloud (Do not read option "Don't know" aloud, type 888 if relevant.)</i>		It has gotten worse.....1 Stayed the same.....2 Better.....3 Don't know.....888
Q.6	If you could use your [MAIN SOURCE OF ELECTRICITY C.2 Code 1 or 2] to power an appliance that you do not currently own, what would it be? <i>Up to 3 answers possible</i>	a. <input type="text"/> <input type="text"/> <input type="text"/> b. <input type="text"/> <input type="text"/> <input type="text"/> c. <input type="text"/> <input type="text"/> <input type="text"/>	Fan.....1 Radio.....2 Television.....3 Refrigerator.....4 Electronic Tablet.....5 Computer.....6 Hair clippers.....7 Power Tools.....8 Phone with internet (smartphone).....9 Other, specify.....555
Q.7	Why do you not yet own one of these appliances? <i>Multiple responses possible</i>		Too expensive.....1 No products available.....2 Products require too much energy, cannot power them with my system.....3 Other, specify.....555
Q.8	How satisfied are you with the service from [MAIN SOURCE OF ELECTRICITY C.2 Code 1 or 2]? <i>Read aloud these options.</i>		Very satisfied.....1 Somewhat satisfied.....2 Neutral.....3 Unsatisfied.....4 Very unsatisfied.....5

ID:

**R. WOMEN’S EMPOWERMENT**

*Respondents should be a female headed household or female spouse of the household head/member in the household.*

MOBILITY		
	Is there a female headed household or female spouse of the household head/member in this place?	Yes.....1 No.....2 → <b>END</b>
	<b>STATEMENT</b> Can you do the following activities alone or you have to go with your husband: Mark who decides about each of the activities below.	<b>RESPONSE CODE:</b> Can do herself .....1 Can do with husband .....2 Can do with others .....3 Other Specify .....4
R.1	Visiting parents/relatives/friends within or outside the village by yourself or do you have to go with your husband?	
R.2	Going to markets/banks/commercial centers/places of work by yourself or do you have to go with your husband?	
R.3	Going outside the village by yourself or do you have to go with your husband?	
ACCESS TO INFORMATION, ORGANIZATION MEMBERSHIP, VILLAGE ELECTRIFICATION COMMITTEE, CAPACITY BUILDING AND ACCESS TO FINANCE		
R.4	If you are a member of a women’s group, which type of group are you a member of/do you belong to? <i>Multiple responses possible.</i>	<b>Code:</b> Not a member.....1 Religious related activities....2 Health care related activities...3 Income generating activities...4 Self help organization..... 5 Savings group.....6 Microfinance organization.....7 Cooperative.....8 Village administrative committee....9 Other specify.....10
R.5	What do you think are the main constraints women face in participating in organizations or activities in the area?	<b>Code:</b> Limited time.....1 Lack of support from family...2 Limited confidence....3 Limited education....4 Other specify.....5
R.6	Do you own a bank account? <i>Read options aloud</i>	<b>Code:</b> No account...1 Own account.....2 Joint account (with spouse).....3 Joint account (with group).....4

FINAL QUESTIONS ENDED INTERVIEW		
GPS Coordinates of the Household	a. Latitude <input type="text"/> <input type="text"/> <input type="text"/> °	b. Longitude <input type="text"/> <input type="text"/> <input type="text"/> °
Comments <i>Enter any comments, notes and /or observations that you deem important for understanding interview results, if necessary, referring to the code of specific questions</i>	<i>Open ended question, no character limit</i>	

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

Comments: