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Sections: 23, Sub-sections: 19,
Questions: 622.
Questions with enabling conditions: 327
Questions with validation conditions: 244
Rosters: 10
Variables: 48

Survey Solutions

WB - MTF - HH (FINAL3)

HOUSEHOLD IDENTIFICATION AND INTERVIEW DETAILS
No sub-sections, No rosters, Questions: 8.

INFORMED CONSENT
No sub-sections, No rosters, Questions: 2, Static texts: 1.

SECTION A - HOUSEHOLD ROSTER
Sub-sections: 3, Rosters: 1, Questions: 56, Static texts: 1, Variables: 1.

SECTION B - HOUSEHOLD CHARACTERISTICS
No sub-sections, No rosters, Questions: 32.

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY
Sub-sections: 8, Rosters: 2, Questions: 204, Static texts: 2, Variables: 2.

SECTION D - WILLINGNESS TO PAY FOR A GRID CONNECTION
No sub-sections, No rosters, Questions: 11, Static texts: 1, Variables: 4.

SECTION E - WILLINGNESS TO PAY FOR SOLAR DEVICE
No sub-sections, No rosters, Questions: 7, Static texts: 1, Variables: 5.

SECTION F - KEROSENE/FUEL-BASED/CANDLE LIGHTING
No sub-sections, Rosters: 1, Questions: 20.

SECTION G - DRY-CELL BATTERIES
No sub-sections, Rosters: 1, Questions: 15.

SECTION H - HOUSEHOLD FUEL CONSUMPTION
No sub-sections, Rosters: 1, Questions: 15.

SECTION I - USE OF COOKING SOLUTIONS
No sub-sections, Rosters: 1, Questions: 51, Static texts: 1, Variables: 3.

SECTION J - WATER HEATING
No sub-sections, No rosters, Questions: 5.

SECTION K - WILLINGNESS TO PAY FOR AN IMPROVED COOKSTOVE
No sub-sections, No rosters, Questions: 7, Static texts: 1, Variables: 32.

SECTION L - CONSUMPTION / EXPENDITURE
Sub-sections: 3, No rosters, Questions: 34, Static texts: 4.

SECTION M - HOUSEHOLD ASSETS: TRANSPORTATION AND AGRICULTURAL EQUIPMENT OWNERSHIP AND TOTAL
No sub-sections, No rosters, Questions: 54, Static texts: 1.

SECTION N - HOUSEHOLD LAND OWNERSHIP AND OTHER ASSETS
No sub-sections, Rosters: 1, Questions: 5, Static texts: 1.

SECTION O - HOUSEHOLD ECONOMIC SHOCKS
No sub-sections, No rosters, Questions: 4, Static texts: 1.

SECTION P - STREET LIGHTING
No sub-sections, No rosters, Questions: 6, Static texts: 1.

SECTION Q - TIME USE
No sub-sections, Rosters: 1, Questions: 10, Static texts: 1.

SECTION R - HEALTH IMPACTS
No sub-sections, Rosters: 1, Questions: 20, Variables: 1.

SECTION S - ATTITUDES
Sub-sections: 5, No rosters, Questions: 31, Static texts: 1.

SECTION T - WOMEN'S EMPOWERMENT
No sub-sections, No rosters, Questions: 14, Static texts: 2.

SECTION U - CONTACT DETAILS
No sub-sections, No rosters, Questions: 11.

APPENDIX A — OPTIONS

APPENDIX B — VARIABLES

APPENDIX C — OPTION FILTERS

LEGEND

HOUSEHOLD IDENTIFICATION AND INTERVIEW DETAILS

SURVEYID	TEXT SCOPE: IDENTIFYING SURVEYID
Province	SINGLE-SELECT PROVINCE 01 ○ Banteay Meanchey 02 ○ Battambang 03 ○ Kampong Cham 04 ○ Kampong Chhnang 05 ○ Kampong Speu 06 ○ Kampong Thom 07 ○ Kampot 08 ○ Kandal 09 ○ Kep 10 ○ Koh Kong 11 ○ Kracheh 12 ○ Mondul Kiri 13 ○ Otdar Meanchey 14 ○ Pailin 15 ○ Phnom Penh 16 ○ Preah Sihanouk And 9 other [1]
District	SINGLE-SELECT: CASCADING DISTRICT 001 ○ Malai 002 ○ Mongkol Borei 003 ○ Ou Chrov 004 ○ Paoy Paet 005 ○ Phnum Srok 006 ○ Serei Saophoan 007 ○ Svay Chek 008 ○ Thma Puok 009 ○ Banan 010 ○ Battambang 011 ○ Bavel 012 ○ Koas Krala 013 ○ Moung Ruessei 014 ○ Phnum Proek 015 ○ Rotonak Mondol 016 ○ Sampov Lun And 125 other [2]
Commune	SINGLE-SELECT: CASCADING COMMUNE 001 ○ Ta Kong 002 ○ Kouk Ballangk 003 ○ Ruessei Kraok 004 ○ Changha 005 ○ Paoy Paet 006 ○ Phsar Kandal 007 ○ Ponley 008 ○ Srah Chik 009 ○ Ou Ambel 010 ○ Preah Ponlea 011 ○ Phkoam 012 ○ Phum Thmei 013 ○ Ta Kream 014 ○ Chamkar Samraong 015 ○ Kdol Doun Teav

	016 ○ Preaek Preah Sdach And 204 other [3]
Village	SINGLE-SELECT: CASCADING VILLAGE 001 ○ Ta Kong 002 ○ Char Thmei 003 ○ Chumteav 004 ○ Ta Chrueng 005 ○ Baliley 2 006 ○ Chan Kiri 007 ○ Kbal Spean 1 008 ○ Kbal Spean 2 009 ○ Ou Chrov 010 ○ Poay Pet 011 ○ Phsar Kandal 012 ○ Prachea Thorm Kaeut 013 ○ Ponley 014 ○ Srah Chik 015 ○ Roung Masin 016 ○ Preah Ponlea And 254 other [4]
Date of 1st visit.	DATE VISIT1
Date of 2nd visit.	DATE VISIT2
Date of 3rd visit.	DATE VISIT3

INFORMED CONSENT

INTSTART - Press here when you start the interview	DATE: CURRENT TIME INTSTART

STATIC TEXT

Hello! My name is ..... working with Angkor Research and Consulting. We are currently conducting a survey for the World Bank about access to energy in Cambodia. I will ask about all of the sources of energy used in your household for lighting, cooking, etc. Your answers will only be used for research purposes and will be kept confidential.
You can pause or skip any questions at any time during the interview, or ask to clarify any question you do not understand. The interview will take around two hours. and it is not a test, and thus there is no right or wrong answer. However all your answers are important and I want you to answer correctly and tell me the truth. This will allow my team to give good information to the World Bank and help improving your household's access to energy in the future.
If you have question about this survey, you can contact to Mr. Khim Sarun via phone number: 023 222 501.
Do you have any questions for me?

Can I start asking questions now?	SINGLE-SELECT CONSENT 00 ○ No 01 ○ Yes

SECTION A - HOUSEHOLD ROSTER

A2 - Please list of all of the individuals who normally live and eat their meals together in	LIST A2

this household, in the last month, starting with the head of household.

I Please record first then last name.

VARIABLE

`A2.Count()`

DOUBLE TOTALMEMBERS

SECTION A - HOUSEHOLD ROSTER

Roster: HOUSEHOLD MEMBERS ROSTER

generated by list question A2 HHROSTER

A3 - Is %rostertitle% male or female?

SINGLE-SELECT A3

01 ○ Male
02 ○ Female

A4 - What is the relationship of %rostertitle% to the household head?

SINGLE-SELECT A4

01 ○ Head
02 ○ Wife/Spouse
03 ○ Child/adopted child
04 ○ Grandchild
05 ○ Niece/Nephew
06 ○ Father/Mother
07 ○ Sister/Brother
08 ○ Son/Daughter-in-law
09 ○ 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

A5 - How old is %rostertitle%?

I Record "0" if infant below one year old.

NUMERIC: INTEGER A5

A7 - Has %rostertitle% ever attended school?

E `A5>=5`

SINGLE-SELECT A7

00 ○ No
01 ○ Yes

A8 - Is %rostertitle% currently attending school?

E `A7==1`

SINGLE-SELECT A8

00 ○ No
01 ○ Yes

A9 - What is the highest grade of education %rostertitle% has completed?

E `A7==1`

SINGLE-SELECT A9

000 ○ Pre-school or no education
001 ○ Grade 1
002 ○ Grade 2
003 ○ Grade 3
004 ○ Grade 4
005 ○ Grade 5
006 ○ Grade 6
007 ○ Grade 7
008 ○ Grade 8
009 ○ Grade 9
010 ○ Grade 10
011 ○ Grade 11
012 ○ Grade 12
013 ○ Some university
014 ○ Bachelors or Associates
015 ○ Masters or Doctorates

And 1 other [5]

A9_other - Other (Specify).

E A9==555

TEXT A9 other

A11 - What is %rostertitle%'s marital status?

E A5>=15

SINGLE-SELECT A11

- 01 ○ Married
- 03 ○ Cohabitating
- 05 ○ Never married
- 06 ○ Divorced
- 07 ○ Separated
- 08 ○ Widowed

A14 - What was %rostertitle%'s main occupation for the last 12 months?

E A5>=15

SINGLE-SELECT A14

- 001 ○ Wage employee, non-farm
- 002 ○ Wage employee, farm
- 003 ○ Self-employed non-farm business enterprise
- 004 ○ Self-employed non-farm independent contractor, technician, professional, etc.
- 005 ○ Self-employed agriculture/livestock
- 006 ○ Assistance in family enterprise
- 007 ○ Casual/Day Laborer
- 008 ○ Intern/free labor/voluntary work
- 009 ○ Student
- 010 ○ Retired/pensioner
- 011 ○ Too old to work
- 012 ○ Disabled
- 013 ○ Job seeker
- 014 ○ Unemployed
- 015 ○ Housewife/husband
- 555 ○ Other

A14_other - Other (Specify)

E A14==555

TEXT A14_other

A15 - Please describe the kind of trade or business %rostertitle%'s main occupation best fits from the list of industries.

E A5>=15 && (A14<=5 || A14==8 || A14==555)

SINGLE-SELECT A15

- 001 ○ Agriculture, forestry or fishing
- 002 ○ Mining and quarrying
- 003 ○ Manufacturing
- 004 ○ Electricity, gas, steam and air conditioning supply
- 005 ○ Water supply; sewerage, waste management and remediation activities
- 006 ○ Construction
- 007 ○ Wholesale and retail trade; repair of motor vehicles and motorcycles
- 008 ○ Transportation and storage
- 009 ○ Accommodation and food service activities
- 010 ○ Information and communication
- 011 ○ Financial and insurance activities
- 012 ○ Real estate activities
- 013 ○ Professional, scientific and technical activities
- 014 ○ Administrative and support service activities

015 ○ Public administration and defense; compulsory social security
016 ○ Education

And 6 other [6]

A15_other - Other (Specify).

E A15==555

TEXT A15_other

A16 - In the last 12 months, how many months was %rostertitle% engaged in this activity?

I Months.
E A5>=15 && (A14<=8 || A14==555)
V1 self>=0 && self<=12
M1 Must be comprised between 0 and 12.

NUMERIC: INTEGER A16

A17 - How many days per month does %rostertitle% work in this activity?

I Days.
E A5>=15 && (A14<=8 || A14==555)
V1 self>=0 && self<=31
M1 Must be comprised between 0 and 31.

NUMERIC: INTEGER A17

A19 - Does %rostertitle% operate any non-agricultural or business enterprise within this household or compound?

E A5>=15 && (A14<=8 || A14==555)

SINGLE-SELECT A19
00 ○ No
01 ○ Yes

A20 - How many employees does this business or enterprise have?

I Number of employees including full-time and part-time.
E A19==1

NUMERIC: INTEGER A20

A21 - Is %rostertitle% present?

E A19==1

SINGLE-SELECT A21
00 ○ No
01 ○ Yes

SECTION A - HOUSEHOLD ROSTER / HOUSEHOLD MEMBERS ROSTER

HOUSEHOLD BUSINESS OR ENTERPRISE

E A19==1 && A21==1

STATIC TEXT

Ask the related household enterprise questions to %rostertitle%, the present business owner.

A23a - Did this enterprise operate every months for the past 12 months?

SINGLE-SELECT A23a
00 ○ No
01 ○ Yes

A23 - In the last 12 months, in which month did this enterprise operate?

I Multiple answers.
E A23a==0

MULTI-SELECT A23
01 ☐ January
02 ☐ February
03 ☐ March
04 ☐ April
05 ☐ May
06 ☐ June
07 ☐ July
08 ☐ August
09 ☐ September

10 ☐ October
11 ☐ November
12 ☐ December

A24 - What was the total revenue of this business or activity in the last month that it was operating?

NUMERIC: INTEGER A24

I Riels. 888 = Don't know
V1 `self==0||self>=100`
M1 Please enter a valid monetary value, higher or equal to 0.

A25 - Could you please estimate total revenue for this business or activity in a regular month, that is, a month that is neither the busiest nor the slowest of the year?

NUMERIC: INTEGER A25

I Riels. Regular month's total sales. 888 = Don't know
V1 `self==0||self>=100`
M1 Please enter a valid monetary value, higher or equal to 0.

A26 - In a regular month, how many hours does your enterprise operate each day and night?

NUMERIC: INTEGER A26

I Hours.
V1 `self>=0 && self<=24`
M1 Must be comprised between 0 and 24.

A27 - In a typical month, how many hours does your enterprise operate each night?

NUMERIC: INTEGER A27

I Hours.
V1 `self>=0 && self<=12`
M1 Must be comprised between 0 and 12.

A28 - Are your enterprise working hours limited by the supply of energy?

SINGLE-SELECT A28

00 ○ No
01 ○ Yes

I e.g. enterprise work at night but cannot because of power outage, or p roduce/sell ice but difficult because cannot power refrigerator during p ower outage, or no power for sewing machines, etc.

A29a - Does your enterprise activity consume energy?

SINGLE-SELECT A29a

00 ○ No
01 ○ Yes

A29 - What are all the different sources of energy that you use in your enterprise?

MULTI-SELECT A29

001 ☐ Grid connection
003 ☐ Electric Generator (connecting one or more households/businesses)
004 ☐ Solar Home System
005 ☐ Solar Lantern/Lighting System
006 ☐ Rechargeable Battery
007 ☐ Dry cell batteries
008 ☐ Pico-Hydro
009 ☐ Liquid Fuel (kerosene, diesel, gasoline)
010 ☐ Coal
011 ☐ Biomass
012 ☐ Manual
555 ☐ Other

I Multiple answers.
E `A29a==1`

A29_other - Other (Specify).

TEXT A29 other

E `A29.Contains(555)`

ENTERPRISES CONNECTED TO NATIONAL GRID OR MINI-GRID

E `A29.ContainsAny(1,2)`

A31 - Does the enterprise have a separate electricity bill from household use?

SINGLE-SELECT — A31

- 00 ○ No
- 01 ○ Yes

A32 - How are you billed for electricity?

I Prompt.

E `A31==1`

SINGLE-SELECT — A32

- 001 ○ Per kWh based on the meter reading
- 002 ○ Fixed monthly fee
- 003 ○ Pay based on lights and appliances used
- 004 ○ Utility estimates consumption
- 555 ○ Other
- 111 ○ No bill for electricity

A32_other - Other (specify).

E `A32==555`

TEXT — A32 other

.....

A33 - What is the most common way to make your electricity bill payment?

E `A31==1 && IsAnswered(A32) && A32!=111`

SINGLE-SELECT — A33

- 001 ○ Cash
- 002 ○ Vouchers/tokens/pre-paid card from local store
- 003 ○ Credits using mobile money
- 004 ○ Pay at the utility office
- 005 ○ Pay at the bank/post office
- 555 ○ Other

A33_other - Other (Specify).

E `A33==555`

TEXT — A33_other

.....

A34 - Can I see your electricity bill or invoice?

E `A31==1 && IsAnswered(A32) && A32!=111`

SINGLE-SELECT — A34

- 01 ○ Respondent has energy bill and shows it
- 02 ○ Respondent has energy bill but refuses to show it or could not locate it
- 03 ○ Respondent does not have an energy bill

A35 - In the last month, how much did you spend on the electric bill?

I Riels. Calculate amount paid from the last bill or ask the respondent to estimate otherwise. 888 = Don't know.

E `A31==1 && IsAnswered(A32) && A32!=111`

V1 `self>=0 || self>=100`

M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER — A35

A36 - In the last month how much electricity did your enterprise use?

I kWh. Calculate the consumption from the last bill if available or ask the respondent to estimate otherwise. 888 = Don't know.

E `A31==1 && IsAnswered(A32) && A32!=111`

V1 `self>=0`

M1 Must be higher or equal to 0.

NUMERIC: INTEGER — A36

A37 - In the %A26% hours your business is usually open during the day, how many hours of electricity are available from the grid?

NUMERIC: INTEGER — A37

I Hours. 888 = Don't know
V1 `self<=A26 || self==888`
M1 Must be lower than %A26% hours.

A38 - In the %A27% nighttime hours your business is usually open during the night, how many hours of electricity are available from the grid?

NUMERIC: INTEGER A38

I Hours. 888 = Don't know
E `A27>0`
V1 `self<=A27 || self==888`
M1 Must be lower or equal to %A27% hours.

A39 - In a typical month, how many outages or blackouts does the enterprise experience each week?

NUMERIC: INTEGER A39

I 0 = None
V1 `self>=0`
M1 Must be higher or equal to 0.

A40 - In a typical week, what was the total duration of all the outages or blackouts?

NUMERIC: INTEGER A40

I Minutes. 1 = 1 minute or less than one minute
E `A39>0`
V1 `self>=0`
M1 Must be higher or equal to 0.

A41a - During typical month, is your business affected by electric power outage?

SINGLE-SELECT A41a

E `A39>0`

00 ○ No
01 ○ Yes

A41 - During a typical month, what are the three main ways your business was affected by an electricity power outage?

MULTI-SELECT A41

I Multiple answers, up to 3.
E `A41a==1`

001 ☐ Continue all operations on more expensive backup supply
002 ☐ Continue reduced operations on more expensive backup supply
003 ☐ Had to turn customers away
004 ☐ Had to send workers home for the day without pay
005 ☐ Had to send workers home for the day with pay
007 ☐ Wasted perishable products/discarded damaged goods
008 ☐ Machines/appliances were damaged in the process
009 ☐ Meetings/transactions were delayed
010 ☐ Provided backup electricity to others
011 ☐ Stop operations and waited for power to return
555 ☐ Other, specify

A41_other - Other (Specify).

TEXT A41 other

E `A41.Contains(555)`

A42 - Was there a loss of revenue in a typical month due to power outages?

SINGLE-SELECT A42

E `A41a==1`

00 ○ No
01 ○ Yes

A43 - How much was the loss of revenue in a typical month due to power outages?

NUMERIC: INTEGER A43

I Riels. 888 = Don't know
E A42==1
V1 self>=100
M1 Please enter a valid monetary value, higher than 0.

A44a - Did the power outage result in extra costs for your enterprise?

SINGLE-SELECT A44a

00 ○ No
01 ○ Yes

E A41a==1

A44 - How much was the extra costs of operating during the outage, such as wasted products, running a backup generator, etc.?

NUMERIC: INTEGER A44

I Riels. 888 = Don't know.
E A44a==1
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

A45a - Does your enterprise have any back-up source of lighting?

SINGLE-SELECT A45a

00 ○ No
01 ○ Yes

A45 - What are the back-up sources for lighting for the enterprise?

MULTI-SELECT A45

I Multiple answers.
E A45a==1
V1 self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5,6,7,555) && !self.Contains(111))
M1 Cannot select any other code with "no backup sources".

001 ☐ Generator
002 ☐ Battery and Storage Devices (e.g.: car battery)
003 ☐ Solar Home System
004 ☐ Solar Lantern/Lighting system
005 ☐ Kerosene lamp
006 ☐ Candle
007 ☐ Torch/flashlight rechargeable
008 ☐ Torch/flashlight dry cell battery
555 ☐ Other

A45_other - Other (Specify).

TEXT A45_other

E A45.Contains(555)

SECTION A - HOUSEHOLD ROSTER / HOUSEHOLD MEMBERS ROSTER / HOUSEHOLD BUSINESS OR ENTERPRISE

SOLAR DEVICES USED BY THE ENTERPRISE

E A29.ContainsAny(4,5)

A47 - What does your enterprise use solar energy for?

MULTI-SELECT A47

I Multiple answers.

001 ☐ Lighting
002 ☐ Cell phone charging – for the enterprise
004 ☐ Operating laptop/computer/tablet
005 ☐ Operate photocopy machine/scanner
006 ☐ Providing entertainment (e.g. playing movies)
007 ☐ Refrigeration
008 ☐ Ventilation
555 ☐ Other

A47_other - Other (Specify).

TEXT A47_other

E A47.Contains(555)

A48 - How many light bulbs are powered with solar in your enterprise?

NUMERIC: INTEGER A48

E A47.Contains(1)
V1 self>=1
M1 Must be higher or equal to 1.

A49 - Can your enterprise solar installation power a fan and/or a television?

SINGLE-SELECT A49
00 ○ No
01 ○ Yes

A50 - What is the capacity of the solar product or system?

NUMERIC: INTEGER A50

I Watt-Peak (Wp) 888 = Don't know.
E A48>1
V1 self>=0
M1 Must be higher or equal to 0.

A51 - How long has your business been using solar energy?

NUMERIC: INTEGER A51

I Months. 0 = Less than one month 888 = Don't know.
V1 self>=0
M1 Must be higher or equal to 0.

SECTION B - HOUSEHOLD CHARACTERISTICS

B1 - Respondent ID

SINGLE-SELECT: LINKED B1

A18 - What is your household average monthly income?

NUMERIC: INTEGER A18

I Riels.
V1 self==0||self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

B2 - Does your household live in this dwelling for the entire year?

SINGLE-SELECT B2
00 ○ No
01 ○ Yes

B3 - Is this the dwelling where you live most of the year?

SINGLE-SELECT B3
00 ○ No
01 ○ Yes

E B2==0

B4 - How many years have you been living in this village?

NUMERIC: INTEGER B4

I Years. 1 = One year or less.
V1 self>=1
M1 Must be higher or equal to 1.

B5 - What is the type of dwelling?

SINGLE-SELECT B5
001 ○ A single house occupied by one household dwelling
002 ○ A house occupied by multiple households
003 ○ Multi-storied building with one household
004 ○ Multi-storied building with more households

I Interviewer checks with own observation.

005 ○ Group of enclosed dwellings: multiple households
006 ○ Group of enclosed dwellings occupied by a single household
555 ○ Other

B5_other - Other (Specify).

E B5==555

TEXT B5_other

B6 - How many households share your dwelling?

I Number of households.
E B5==2 || B5==4 || B5==5 || B2==555
V1 self>1
M1 Must be higher than 1.

NUMERIC: INTEGER B6

B7 - Do you own this dwelling?

SINGLE-SELECT B7
00 ○ No
01 ○ Yes

B8 - Do you use it for free or rent it?

E B7==0

SINGLE-SELECT B8
01 ○ Free
02 ○ Rented

B9 - How many rooms, excluding kitchen, toilet and bathroom, does the household occupy?

I Rooms.
V1 self>=1
M1 Must be higher or equal to 1.

NUMERIC: INTEGER B9

B10 - The walls of the dwelling are mainly made of what material?

I Interviewer checks with own observation.

SINGLE-SELECT B10
001 ○ Bamboo, thatch/leaves, grass
002 ○ Wood or logs
003 ○ Plywood
004 ○ Concrete, brick, stone
005 ○ Galvanised iron or aluminium or other meal sheets
006 ○ Fibrous cement/asbestos
007 ○ Makeshift, mixed materials
008 ○ Clay/dung with straw
555 ○ Other

B10_other - Other (Specify).

E B10==555

TEXT B10 other

B11 - The roof of the dwelling is mainly made of what material?

I Interviewer checks with own observation.

SINGLE-SELECT B11
001 ○ Thatch/leaves/grass
002 ○ Tiles
003 ○ Fibrous cement
004 ○ Galvanised iron or aluminium or other meal sheets
005 ○ Salvaged materials
006 ○ Mixed but predominantly made of galvanised iron/aluminium, tiles or fibrous cement
007 ○ Mixed but predominantly made of thatch/leave/grass or salvaged materials
008 ○ Concrete
009 ○ Plastic sheet
555 ○ Other

B11_other - Other (Specify).

E B11==555

TEXT B11_other

B12 - The floor of the dwelling is mainly made of what material?

I Interviewer checks with own observation.

SINGLE-SELECT B12

001 ○ Earth, clay
002 ○ Wooden planks
003 ○ Bamboo strips
004 ○ Cement/brick/stone
005 ○ Parquet, polished wood
006 ○ Polished stone, marble
007 ○ Vinyl
008 ○ Ceramic tiles
555 ○ Other

B12_other - Other (Specify).

E B12==555

TEXT B12_other

B13 - What type of toilet facility does your household use?

I Multiple answers.

MULTI-SELECT B13

001 ☐ Private, connected to sewerage
002 ☐ Private, septic tank
003 ☐ Private, pit latrine
004 ☐ Shared toilet connected to sewerage
005 ☐ Shared toilet with septic tank
006 ☐ Shared pit latrine
007 ☐ Open land
555 ☐ Other

B13_other - Otyher (Specify).

E B13.Contains(555)

TEXT B13_other

B14 - What is your household's main source of drinking water?

SINGLE-SELECT B14

001 ○ Piped in dwelling or on premises
002 ○ Public tap
003 ○ Tubed/piped well or borehole
004 ○ Protected dug well (including: lining, headwall, platform, cover)
005 ○ Unprotected dug well
006 ○ Pond, river or stream
007 ○ Rainwater
008 ○ Tanker truck, vendor or otherwise bought
555 ○ Other

B14_other - Other (Specify).

E B14==555

TEXT B14_other

B15 - Is your drinking water treated?

I Chemical treatment, boiling, filtering.

SINGLE-SELECT B15

000 ○ No
001 ○ Yes
888 ○ Don't know

B16a - Does anyone in your household have a bank account?

SINGLE-SELECT B16a

00 ○ No
01 ○ Yes

B16b - Does anyone in your household have a microfinance institution account?

SINGLE-SELECT B16b

00 ○ No
01 ○ Yes

B16c - Is anyone in your household member of a saving group?

SINGLE-SELECT B16c

00 ○ No
01 ○ Yes

B16d - Does anyone in your household play tong ting?

SINGLE-SELECT B16d

00 ○ No
01 ○ Yes

B20 - If you need to borrow money, who would you borrow money from?

I Multiple answers.

MULTI-SELECT B20

001 ☐ Bank
003 ☐ Microfinance institution
006 ☐ NGO
008 ☐ Employer
009 ☐ Moneylender
010 ☐ Shop
011 ☐ Relative/friend/neighbor
012 ☐ Mobile money services
555 ☐ Other

B20_other - Other (Specify).

E B20.Contains(555)

TEXT B20 other

B21 - Do you have an account for mobile money transactions?

I Like Wing for example.

SINGLE-SELECT B21

00 ○ No
01 ○ Yes

B23 - Have you made any mobile money transactions in the past 90 days?

SINGLE-SELECT B23

00 ○ No
01 ○ Yes

B24 - Which transactions did you make?

I Multiple answers.
E B23==1

MULTI-SELECT B24

001 ☐ Receive money from family/friends/other
002 ☐ Transfer credit to family/relatives
003 ☐ Top up credit
004 ☐ Receive NGO/State support
005 ☐ Pay for Electricity
006 ☐ Pay for Water
007 ☐ Internet top-up/credit
008 ☐ Commercial purchases
009 ☐ Insurance
010 ☐ Loan payments
011 ☐ Savings
012 ☐ Get small loans from mobile provider
555 ☐ Other

B24_other - Other (Specify).

E B24.Contains(555)

TEXT B24 other

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY

C1 - Respondent ID

SINGLE-SELECT: LINKED C1

C2 - Is the household connected to the grid?

SINGLE-SELECT C2

00 ○ No
01 ○ Yes

C3 - How far is your house from the nearest national grid line?

NUMERIC: INTEGER C3

I Kilometers. 0 = Less than one km 888 = Don't know.
E C2==0
V1 self>=0
M1 Must be higher or equal to 0.

C4 - What is the MAIN reason why your household is not connected to the grid?

SINGLE-SELECT C4

E C2==0

001 ○ Grid is too far from household/not available
002 ○ Cost of initial connection is too expensive
003 ○ Monthly fee is too expensive
004 ○ Satisfied with current energy solution
005 ○ Renting, Landlord decision
006 ○ Service Unreliable
007 ○ Administrative procedure is too complicated
008 ○ Submitted application and waiting for connection
009 ○ Company refused to connect the household
555 ○ Other

C4_other - Other (Specify).

TEXT C4 other

E C4==555

C5 - Do you expect to get grid connection?

SINGLE-SELECT C5

E C2==0

000 ○ No, don't expect to get grid connection
001 ○ Yes
888 ○ Don't know

C6 - What month and year do you expect to get grid connection?_month

SINGLE-SELECT C6 month

E C5==1 || C5==888

001 ○ January
002 ○ February
003 ○ March
004 ○ April
005 ○ May
006 ○ June
007 ○ July
008 ○ August
009 ○ September
010 ○ October
011 ○ November
012 ○ December
888 ○ Don't know

C6 - What month and year do you expect to get grid connection?_year

NUMERIC: INTEGER C6 year

I 888 = Don't know
E C5==1 || C5==888
V1 self>=2017 || self==888
M1 Must be higher or equal to 2017.

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY

ELECTRICITY FROM NATIONAL GRID OR MINI-GRID

E C2==1

C7 - How many years have you had this grid connection?

NUMERIC: INTEGER C7

I Years. 1 = one year or less. 888 = Don't know
V1 self>=1
M1 Must be higher or equal to 1.

C8a - Did your household pay for the grid connection?

SINGLE-SELECT C8a
00 ○ No
01 ○ Yes

C8 - How much did your household pay for the grid connection fee?

NUMERIC: INTEGER C8

I Riels. Connection fee ONLY. 888 = Don't know
E C8a==1
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

C9a - Did your household pay for the internal wiring?

SINGLE-SELECT C9a
00 ○ No
01 ○ Yes

C9 - How much did your household pay for the internal wiring fee?

NUMERIC: INTEGER C9

I Riels. Do not include connection fee from C8. 888 = Don't know.
E C9a==1
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

C10 - How many weeks after you applied for the grid connection did your household get connected?

NUMERIC: INTEGER C10

I Weeks. 0 = Immediately or less than one week 888 = Don't know.
V1 self>=0
M1 Must be higher or equal to 0.

C11 - How many weeks after you were connected were you able to use electricity in your home?

NUMERIC: INTEGER C11

I Weeks. 0 = Immediately or less than one week 888 = Don't know.
V1 self>=0
M1 Must be higher or equal to 0.

C39 - Is there a limit of capacity or of number of appliances you are allowed to power from this mini-grid?

SINGLE-SELECT C39
000 ○ No
001 ○ Yes
888 ○ Don't know

C46 - Have you applied for an upgrade of service since you connected to the mini-grid?

SINGLE-SELECT C46
00 ○ No
01 ○ Yes

I e.g. add more capacity

C12a - Does your household pay for electricity consumption?

SINGLE-SELECT C12a
00 ○ No
01 ○ Yes

C12 - Who receives the payment for your electricity service?

SINGLE-SELECT C12
001 ○ Energy company
002 ○ Community/village/municipality

E C12a==1

003 ○ Relative
004 ○ Neighbor
005 ○ Landlord
555 ○ Other

C12_other - Other (Specify).

E C12==555

TEXT C12_other

C13 - Does your household have an electric meter?

E C12a==1

SINGLE-SELECT C13
00 ○ No
01 ○ Yes

C15 - Does your household share the electric meter?

E C13==1

SINGLE-SELECT C15
00 ○ No
01 ○ Yes

C16 - How many households are sharing the meter?

I Households.
E C15==1
V1 self>1
M1 Must be higher than 1.

NUMERIC: INTEGER C16

C17 - How are you billed for electricity?

I Prompt.
E C13==0

SINGLE-SELECT C17
001 ○ Fixed monthly fee
002 ○ Pay based on lights and appliances used
003 ○ Utility estimates consumption
555 ○ Other

C17_other - Other (Specify).

E C17==555

TEXT C17_other

C18 - How do you usually pay for electricity?

I Prompt.
E C12a==1

SINGLE-SELECT C18
001 ○ Cash
002 ○ Vouchers/token/pre-paid card from local store
003 ○ Credits using mobile money
004 ○ Pay at the utility office
005 ○ Pay at the bank/post office
555 ○ Other

C18_other - Other (Specify).

E C18==555

TEXT C18 other

C19 - Can I see your electricity bill or invoice?

E C12a==1

SINGLE-SELECT C19
01 ○ Respondent has energy bill and shows it
02 ○ Respondent has energy bill but refuses to show it or could not locate it
03 ○ Respondent does not have an energy bill

C40 - What is the name of the billing grid company?

I Copy from the invoice or ask the respondent. 888 = Don't know
E C12a==1

TEXT C40

C20 - In the last month, how much did you

NUMERIC: INTEGER C20

spend on the electric bill?

I Riels. Calculate amount paid from the last bill or ask the respondent to estimate otherwise. 888 = Don't know.
E `C12a==1`
V1 `self==0 || self>=100`
M1 Please enter a valid monetary value, higher or equal to 0.

C21 - In the last month how much electricity did your household consume?

NUMERIC: INTEGER C21

I kWh. Calculate the consumption from the last bill if available or ask the respondent to estimate otherwise. 888 = Don't know.
V1 `self>=0`
M1 Must be higher or equal to 0.

C22 - Is the quality of electricity service the same all year?

SINGLE-SELECT C22

000 ○ No
001 ○ Yes
888 ○ Don't know

C23 - What are the worst months for service from the grid?

MULTI-SELECT C23

I Multiple answers. Record all months when household has the lowest n umber of hours of electricity supply
E `C22==0`
V1 `self.ContainsOnly(888) || (self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && !self.Contains(888))`
M1 Cannot select any other codes with "Don't know".

001 ☐ January
002 ☐ February
003 ☐ March
004 ☐ April
005 ☐ May
006 ☐ June
007 ☐ July
008 ☐ August
009 ☐ September
010 ☐ October
011 ☐ November
012 ☐ December
888 ☐ Don’t Know

C24a - Did you receive information about which hours of the day electricity from the grid is available in the worst months?

SINGLE-SELECT C24a

E `C22==0`

00 ○ No
01 ○ Yes

C24b - Did you receive information about which hours of the day electricity from the grid is available in a typical month?

SINGLE-SELECT C24b

00 ○ No
01 ○ Yes

C25a - How many hours of electricity are available each day and night from the grid in the worst months?

NUMERIC: INTEGER C25a

I Hours. 888 = Don't know.
E `C22==0`
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24.

C25b - How many hours of electricity are available each day and night from the grid in a typical month?

NUMERIC: INTEGER C25b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `(C22==0 && C25a==888) || (C22==0 && C25a<=24 && self>=C25a) || C22==1 || C22==888`
M2 Must be higher or equal to the %C25a% hours of electricity available per day in the worst months.

C26a - How many hours of electricity are available each evening, from 6:00 pm to 10:00 pm from the grid in the worst months?

NUMERIC: INTEGER C26a

I Hours. 888 = Don't know.
E `C22==0`
V1 `(self>=0 && self<=4) || self==888`
M1 Must be comprised between 0 and 4 hours.
V2 `C25a==888 || (C25a<=24 && self<=C25a)`
M2 Must be lower or equal to the %C25a% hours of electricity available per day in worst months.

C26b - How many hours of electricity are available each evening, from 6:00 pm to 10:00 pm from the grid in a typical month?

NUMERIC: INTEGER C26b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=4) || self==888`
M1 Must be comprised between 0 and 4 hours.
V2 `C25b==888 || (C25b<=24 && self<=C25b)`
M2 Must be lower or equal to the %C25b% hours of electricity available per day in a typical month.
V3 `(C22==0 && C26a==888) || (C22==0 && C26a<=4 && self>=C26a) || C22==1 || C22==888`
M3 Must be higher or equal to the %C26a% hours of electricity available in the evening in the worst months.

C27a - How many hours of electricity do you use each day and night from the grid in the worst months?

NUMERIC: INTEGER C27a

I Hours. 888 = Don't know.
E `C22==0`
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `C25a==888 || (C25a<=24 && self<=C25a)`
M2 Must be lower or equal to the %C25a% hours of electricity available per day in worst months.

C27b - How many hours of electricity do you use each day and night from the grid in a typical month?

NUMERIC: INTEGER C27b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `C25b==888 || (C25b<=24 && self<=C25b)`
M2 Must be lower or equal to the %C25b% hours of electricity available per day in a typical month.

C28a - How many outages or blackouts occur in a week in the worst months?

NUMERIC: INTEGER C28a

I Number of outages or blackouts. 888 = Don't know.
E `C22==0`
V1 `self>=0 || self==888`
M1 Must be higher or equal to 0.

C28b - How many outages or blackouts occur in a week in a typical month?

NUMERIC: INTEGER C28b

I Number of outages or blackouts. 888 = Don't know.
V1 `self>=0 || self==888`
M1 Must be higher or equal to 0.

C29a - What is the total duration of all the outages or blackouts in a week in the worst months?

NUMERIC: INTEGER C29a

I Minutes. 888 = Don't know.
E `C22==0 && C28a>0`

V1 self>=0 || self==888
M1 Must be higher or equal to 0.

C29b - What is the total duration of all the outages or blackouts in a week in a typical month?

NUMERIC: INTEGER C29b

I Minutes. 888 = Don't know.
E C28b>0
V1 self>=0 || self==888
M1 Must be higher or equal to 0.

C30 - What is your main back-up source of lighting during outages or blackouts of the grid?

SINGLE-SELECT C30

001 ○ Local mini grid connection
002 ○ Electric generator
003 ○ Rechargeable battery and storage devices (e.g. car battery)
004 ○ Solar home system
005 ○ Solar Lantern/ solar lighting system
006 ○ Pico-hydro
007 ○ Kerosene lamp
008 ○ Fuel-based lighting
009 ○ Dry-cell (non-rechargeable) battery/ Torch/ Flashlight
010 ○ Candle
011 ○ Torch/flashlight rechargeable
111 ○ No back-up source
555 ○ Other

C30_other - Other (Specify).

TEXT C30_other

E C30==555

C31 - What is your main back-up source of electricity for appliances during outages or blackouts of the grid?

I Appliances including mobile phones charging.

SINGLE-SELECT C31

001 ○ Local mini grid connection
002 ○ Electric Generator
003 ○ Rechargeable battery and storage devices (e.g. car battery)
004 ○ Solar Home System
005 ○ Solar Lantern/lighting system
006 ○ Pico-hydro
555 ○ Other
111 ○ No back-up source

C31_other - Other (Specify).

TEXT C31_other

E C31==555

C32a - Can you request for repairs in electricity service or file a complaint?

SINGLE-SELECT C32a

000 ○ No
001 ○ Yes
888 ○ Don't know

C32 - How do you request for repairs in electricity service or file a complaint?

E C32a==1

SINGLE-SELECT C32

001 ○ Call/SMS utility company
002 ○ Call a local technician
003 ○ Send a letter/email
004 ○ Social media
005 ○ Talk to community representative
555 ○ Other

C32_other - Other (Specify).

TEXT C32_other

E C32==555

C33 - When there is a blackout in your village, who do you usually approach for assistance?

SINGLE-SELECT C33

01 ○ The power company
02 ○ Someone not from power company
03 ○ No-one: we wait until power returns

C34 - The last time you asked for assistance, how many days after you contacted %C33% did they come to fix the problem?

I Days. 888 = Don't know.
E C33<=2
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C34

C35 - In the last 12 months, did any of your appliances get damaged because the voltage was going up and down from the grid?

SINGLE-SELECT C35

000 ○ No
001 ○ Yes
888 ○ Don't know

C36 - What are the most serious problems you experience with your grid electricity?

I Multiple answers. Record up to 2 answers.
V1 self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5,6,7,8,9,555) && !self.Contains(111))
M1 Cannot select any other answer with "No problems".

MULTI-SELECT C36

001 ☐ Supply shortage/not enough hours of electricity
002 ☐ Low/high voltage problems or voltage fluctuations
003 ☐ Unpredictable interruptions
004 ☐ Unexpectedly high bills
005 ☐ High cost of electricity
006 ☐ Do not trust the supplier
007 ☐ Cannot power large appliances
008 ☐ Maintenance/service problems
009 ☐ Unpredictable bills
555 ☐ Other
111 ☐ No problems

C36_other - Other (Specify).

E C36.Contains(555)

TEXT C36 other

C37 - In the last 12 months, did any household members die or have permanent limb damage because of the grid electricity?

SINGLE-SELECT C37

00 ○ No
01 ○ Yes

C75 - In the last 12 months, did the household use a generator to supply electricity?

SINGLE-SELECT C75

00 ○ No
01 ○ Yes

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY

ELECTRIC GENERATOR SET

E C75==1

C76 - How many generators does your household use to supply electricity?

I # generators. 888 = Don't know.
V1 self>=1
M1 Must be higher or equal to 1

NUMERIC: INTEGER C76

STATIC TEXT

DO NOT READ: If multiple generators, ask following questions about main generator.

C84 - Does your household own the generator?

SINGLE-SELECT C84

00 ○ No
01 ○ Yes

C89 - How much did you pay to purchase the generator?

I Riels. 888 = Don't know.
E C84==1
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER C89

C85 - Who owns the generator?

E C84==0

SINGLE-SELECT C85

001 ○ Other Household
002 ○ Community organization
003 ○ Private person/entity
555 ○ Other
888 ○ Don’t know

C85_other - Other (Specify).

E C85==555

TEXT C85 other

C86 - Do you rent the generator or use it for free?

E C84==0

SINGLE-SELECT C86

01 ○ Rent
02 ○ Use for free

C87 - How do you pay for electricity services from the generator?

E C86==1

SINGLE-SELECT C87

001 ○ Fixed payment (per month or week)
002 ○ Charge by number of lights/appliances
003 ○ Charge per kWh
004 ○ Pay for fuel only
555 ○ Other

C87_other - Other (Specify).

E C87==555

TEXT C87 other

C80a - Have you used this generator each month in the past 12 months?

SINGLE-SELECT C80a

00 ○ No
01 ○ Yes

C80 - In the last 12 months, in which months did you use this generator?

I Multiple answers.
E C80a==0

MULTI-SELECT C80

01 ☐ January
02 ☐ February
03 ☐ March
04 ☐ April
05 ☐ May
06 ☐ June
07 ☐ July
08 ☐ August
09 ☐ September
10 ☐ October
11 ☐ November
12 ☐ December

C88 - In the months that you use it, how much did you pay to use the generator each month?

I Riels. Do not include any cost of fuel, only fee for using the GENERATO R. 888 = Don't know.

NUMERIC: INTEGER C88

E C87!=4
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

C81 - In the months that you use it, for how many days per month do you typically use this generator?

I Days. 888 = Don't know.
V1 (self>=0 && self<=31) || self==888
M1 Must be comprised between 0 and 31.

NUMERIC: INTEGER C81

C82 - In the last 12 months, what did your household use this generator for?

I Multiple answers.

MULTI-SELECT C82
001 ☐ Lighting
002 ☐ Appliances
003 ☐ Home-based income activity
555 ☐ Other
888 ☐ Don’t know

C82_other - Other (Specify).

E C82.Contains(555)

TEXT C82_other

C83 - For how many years have you used this generator?

I Years. 1 = one year or less. 888 = Don't know.
V1 self>=1
M1 Must be higher or equal to 1.

NUMERIC: INTEGER C83

C90 - In the last 12 months, how much did you pay for repairs, parts or maintenance of the generator?

I Riels. 888 = Don't know. 0 = No repair
E C86!=2 && C87!=4
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER C90

C91 - What fuel is used to power the generator?

SINGLE-SELECT C91
001 ○ Diesel
002 ○ Gasoline
555 ○ Other
888 ○ Don’t know

C91_other - Other (Specify).

E C91==555

TEXT C91_other

C92 - In the last 30 days, what was the total quantity of fuel used to power the generator?

I In liters. 888 = Don't know.
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C92

C93 - Do you pay for the fuel used to power the generator?

SINGLE-SELECT C93
00 ○ No
01 ○ Yes

C94 - In the last 30 days, how much did your household spend on fuel for this generator?

I Riels. 888 = Don't know.
E C93==1
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER C94

C95 - Is the generator the household's main source of electricity?

SINGLE-SELECT C95

00 ○ No
01 ○ Yes

C96 - Are there certain months or seasons of the year when less fuel is available to power the generator?

E C95==1

SINGLE-SELECT C96

00 ○ No
01 ○ Yes

C97 - What are the worst months of fuel availability for the generator?

I Multiple answers. Record all months when household has the lowest n umber of hours of electricity supply
E C96==1
V1 self.ContainsOnly(888) || (self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && !self.Contains(888))
M1 Cannot select any other code with "Don't know".

MULTI-SELECT C97

001 ☐ January
002 ☐ February
003 ☐ March
004 ☐ April
005 ☐ May
006 ☐ June
007 ☐ July
008 ☐ August
009 ☐ September
010 ☐ October
011 ☐ November
012 ☐ December
888 ☐ Don't Know

C77 - Do you share this generator with other households?

SINGLE-SELECT C77

00 ○ No
01 ○ Yes

C78 - How many households are sharing electricity from this generator?

I Households. 888 = Don't know.
E C77==1
V1 self >= 1
M1 Must be higher or equal to 1.

NUMERIC: INTEGER C78

C79a - DO NOT READ: What is the capacity of the generator?

I Read name plate of the generator. 888 = Don't know.
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C79a

C79b - Generator capacity unit?

E C79a>0 && C79a!=888

SINGLE-SELECT C79b

001 ○ Kilo Volt Amps (kVA)
002 ○ Horse power (hp)
003 ○ Kilo Watt (kW)
555 ○ Other

C79b_other - Other (Specify).

E C79b==555

TEXT C79b_other

C98a - How many hours could you use this generator each day and night if you wanted to in the worst months?

I Hours. 888 = Don't know.
E C96==1
V1 (self>=0 && self<=24) || self==888
M1 Must be comprised between 0 and 24 hours.

NUMERIC: INTEGER C98a

C98b - How many hours could you use this generator each day and night if you wanted to in a typical month?

NUMERIC: INTEGER C98b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `(C96==1 && C98a==888) || (C96==1 && C98a<=24 && self>=C98a) || C96==0 || C95==0`
M2 Must be higher or equal to the %C98a% hours of electricity available per day in worst months.

C99a - How many hours could you use this generator each evening, from 6:00 pm to 10:00 pm if you wanted to in the worst months?

NUMERIC: INTEGER C99a

I Hours. 888 = Don't know.
E `C96==1`
V1 `(self>=0 && self<=4) || self==888`
M1 Must be comprised between 0 and 4 hours.
V2 `C98a==888 || (C98a<=24 && self<=C98a)`
M2 Must be lower or equal to the %C98a% hours of electricity available per day in worst months.

C99b - How many hours could you use this generator each evening, from 6:00 pm to 10:00 pm if you wanted to in a typical month?

NUMERIC: INTEGER C99b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=4) || self==888`
M1 Must be comprised between 0 and 4 hours.
V2 `C98b==888 || (C98b<=24 && self<=C98b)`
M2 Must be lower or equal to the %C98b% hours of electricity available per day in a typical month.
V3 `(C96==1 && C99a==888) || (C96==1 && C99a<=4 && self>=C99a) || C96==0 || C95==0`
M3 Must be higher or equal to the %C99a% hours of electricity available in the evening in worst months.

C100a - How many hours do you actually use this generator each day in the worst months?

NUMERIC: INTEGER C100a

I Hours. 888 = Don't know.
E `C96==1`
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `C98a==888 || (C98a<=24 && self<=C98a)`
M2 Must be lower or equal to the %C98a% hours of electricity available per day in worst months.

C100b - How many hours do you actually use this generator each day in a typical month?

NUMERIC: INTEGER C100b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `C98b==888 || (C98b<=24 && self<=C98b)`
M2 Must be lower or equal to the %C98b% hours of electricity available per day in a typical month.

C101 - In the last 12 months, did any of your appliances get damaged because the voltage was going up and down from the generator?

SINGLE-SELECT C101

- 000 ○ No
- 001 ○ Yes
- 888 ○ Don't know

C102 - What are the most serious problems you experience with the generator?

I Multiple answers. Record up to 2 answers.
V1 `self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5,6,7,555) && !self.Contains(111))`
M1 Cannot select any other answer with "No problems".

MULTI-SELECT C102

- 001 ☐ Limited power supply
- 002 ☐ Cannot power large appliances
- 003 ☐ Too expensive to use (including high cost of fuel/rent)
- 004 ☐ Availability of the fuel
- 005 ☐ Hard to maintain/service
- 006 ☐ Loud/Noisy

007 ☐ Unpredictable interruptions
555 ☐ Other
111 ☐ No problems

C102_other - Other (Specify).

E C102.Contains(555)

TEXT C102 other

C103 - In the last 12 months, did any household members die or have permanent limb damage because of the generator?

SINGLE-SELECT C103
00 ○ No
01 ○ Yes

C104 - In the last 12 months, did the household use any rechargeable batteries, such as car batteries, for electricity?

SINGLE-SELECT C104
00 ○ No
01 ○ Yes

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY

EXTERNALLY RECHARGED BATTERY (CAR BATTERY, ETC.)

E C104==1

C105a - Did you use rechargeable batteries each month in the past 12 months?

SINGLE-SELECT C105a
00 ○ No
01 ○ Yes

C105 - In the last 12 months, in which months did you use rechargeable batteries or did you use it all year?

I Multiple answers.
E C105a==0
V1 self.ContainsOnly(888) || (self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && !self.Contains(888))
M1 Cannot select any other code with "Don't know".

MULTI-SELECT C105
001 ☐ January
002 ☐ February
003 ☐ March
004 ☐ April
005 ☐ May
006 ☐ June
007 ☐ July
008 ☐ August
009 ☐ September
010 ☐ October
011 ☐ November
012 ☐ December
888 ☐ Don’t know

C106 - In the last 12 months, what did your household use rechargeable batteries for?

I Multiple answers.

MULTI-SELECT C106
001 ☐ Lighting
002 ☐ Appliances
003 ☐ Home-based income activity
555 ☐ Other

C106_other - Other (Specify).

E C106.Contains(555)

TEXT C106 other

C107 - Does your household use an inverter with the batteries, that allows you to use AC appliances?

SINGLE-SELECT C107
00 ○ No
01 ○ Yes

C108 - What is the capacity of the inverter?

I Watts. 888 = Don't know
E C107==1
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C108

C109 - How many rechargeable batteries do

NUMERIC: INTEGER C109

you use in a typical month?

I Number of batteries.
V1 self>=1
M1 Must be higher or equal to 1.

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY / EXTERNALLY RECHARGED BATTERY (CAR BATTERY, ETC.)

Roster: BATTERY ROSTER

generated by numeric question C109 — BATTERYROSTER

VARIABLE	DOUBLE	ROWNUM
@rowindex+1		

C110 - What is the capacity of the rechargeable battery %ROWNUM%?

NUMERIC: INTEGER — C110

I Ampere-hour. 888 = Don't know.
V1 self>=0
M1 Must be higher or equal to 0.

C111 - What is the voltage of the rechargeable battery %ROWNUM%?

NUMERIC: INTEGER — C111

I Volts. 888 = Don't know.
V1 self>=0
M1 Must be higher or equal to 0.

C112a - Did you purchase the rechargeable battery %ROWNUM%?

SINGLE-SELECT — C112a

00 ○ No
01 ○ Yes

C112 - How much did you pay for the rechargeable battery %ROWNUM%?

NUMERIC: INTEGER — C112

I Riels. 888 = Don't know.
E C112a==1
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

C113 - How many recharges for battery %ROWNUM% does your household have in a typical month?

NUMERIC: INTEGER — C113

I Number of recharges in one month. 888 = Don't know.
V1 self>=0
M1 Must be higher or equal to 0.

C114 - Do you pay to recharge the batteries?

SINGLE-SELECT — C114

00 ○ No
01 ○ Yes

C115 - How much in total does your household spend in a typical month to recharge the batteries?

NUMERIC: INTEGER — C115

I Riels. Total for all batteries. 888 = Don't know.
E C114==1
V1 self>=100
M1 Please enter a valid monetary value, higher or equal to 100.

C116 - What is the electricity source used to recharge the battery?

SINGLE-SELECT — C116

001 ○ Grid
003 ○ Electric generator
004 ○ Solar
555 ○ Other

C116_other - Other (Specify).

E C116==555

TEXT C116_other

C117 - Is battery recharging limited by availability of electricity from %C116%?

SINGLE-SELECT C117

000 ○ No
001 ○ Yes
888 ○ Don't know

C118 - How many hours can you use rechargeable batteries for electricity supply each day when fully charged if you wanted to?

I Hours. 888 = Don't know.
V1 (self>=0 && self<=24) || self==888
M1 Comprised between 0 and 24.

NUMERIC: INTEGER C118

C119 - How many hours do you actually use rechargeable batteries for electricity supply each day?

I Hours. 888 = Don't know.
V1 self<=C118
M1 Must be lower or equal to %C118% hours.

NUMERIC: INTEGER C119

C120 - What are the most serious problems you experience with the rechargeable batteries?

I Record up to 2 answers.
V1 self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5,6,555) && !self.Contains(111))
M1 Cannot select any other answer with "No problems".

MULTI-SELECT C120

001 ☐ Supply shortage/not enough hours of electricity
002 ☐ Too expensive
003 ☐ Cannot power large appliances
004 ☐ Recharging is not convenient
005 ☐ Maintenance & repair is difficult
006 ☐ Cannot recharge battery to full capacity
555 ☐ Other
111 ☐ No problems

C120_other - Other (Specify).

E C120.Contains(555)

TEXT C120_other

C121 - In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the rechargeable batteries?

SINGLE-SELECT C121

00 ○ No
01 ○ Yes

C122 - In the last 12 months, did the household use any solar based devices?

SINGLE-SELECT C122

00 ○ No
01 ○ Yes

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY

SOLAR BASED DEVICES

E C122==1

C123 - How many solar based devices has your household been using in the last 12 months?

I Number of solar based devices.
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C123

VARIABLE
@rowindex+1

DOUBLE ROWNUM2

STATIC TEXT

DO NOT READ: Ask about all solar based devices, starting with the most important one.

C128 - What is the manufacturer and model of the device %ROWNUM2%?

TEXT C128

C130 - How many light bulbs are powered by this solar device %ROWNUM2%?

I Count light bulbs which can be separated from each other.
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C130

C131 - What is the capacity of the solar product or system?

I Watt-Peak (Wp). Read the name plate of the solar panel 888 = Don't know.
E C130>1
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C131

C132 - What is the size of the solar panel?

E C131==888

TEXT C132

C133 - What is the capacity of the battery?

I Amp-hours. 888 = Don't know.
E C130>1
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C133

C134 - Do you use an inverter with this solar device?

E C130>1

SINGLE-SELECT C134
00 ○ No
01 ○ Yes

C135 - For how many years have you had the device %ROWNUM2%?

I Years. 1 = one year or less
V1 self>=1
M1 Must be higher or equal to 1.

NUMERIC: INTEGER C135

C136 - Who decided to purchase or acquire this device %ROWNUM2%?

SINGLE-SELECT: LINKED C136

C137 - Did you buy this device %ROWNUM2%, rent it, or did you receive it for free?

SINGLE-SELECT C137
01 ○ Bought it
02 ○ Rent
03 ○ Pay fee to use
04 ○ Received for free

C138 - Who gave you this device %ROWNUM2%?

E C137==4

SINGLE-SELECT C138
001 ○ Local private organizations (NGO)
002 ○ Chief of village
003 ○ Local government

004 ○ Relative/Friend
555 ○ Other

C138_other - Other (Specify).

E C138==555

TEXT C138_other

C139a - Did you pay this device in one time or several times?

E C137==1

SINGLE-SELECT C139a

01 ○ Paid fully in one time
02 ○ Paid in several times

Q139b - How many times do you have to pay under installment?

I Number of payments.
E C139a==2
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER Q139b

C139c - How much did you pay for this device %ROWNUM2% upfront?

I Riels.
E C137==1
V1 self>=100
M1 Please enter a valid monetary value, higher or equal to 100.

NUMERIC: INTEGER C139c

C140 - What payment system do you use?

E C137==3

SINGLE-SELECT C140

01 ○ Mobile Pay-as-you-go
02 ○ Other Pay-as-you go (scratch card, etc.)
03 ○ Fixed fee (depending on number of light bulbs or appliances, etc.)
04 ○ Paid by consumption

C141 - What is the monthly payment for device %ROWNUM2%?

I Riels. Record for instalment, fee to rent or use.
E (C137==1 && C139a==2) || C137==2
V1 self>=100
M1 Please enter a valid monetary value, higher or equal to 100.

NUMERIC: INTEGER C141

C142 - Did/do you borrow money to make your payment for device %ROWNUM2%?

E C137<=3

SINGLE-SELECT C142

00 ○ No
01 ○ Yes

C143 - Did you receive information and training on device %ROWNUM2%?

SINGLE-SELECT C143

00 ○ No
01 ○ Yes

Q144a - Can you charge your mobile phone using this solar product?

SINGLE-SELECT Q144a

00 ○ No
01 ○ Yes

Q144b - Can you power radio using this solar product?

SINGLE-SELECT Q144b

00 ○ No
01 ○ Yes

Q144c - Can you power television using this solar product?

SINGLE-SELECT Q144c

00 ○ No
01 ○ Yes

Q144d - Can you power a fan using this solar product?

SINGLE-SELECT Q144d

00 ○ No
01 ○ Yes

C144e - How many hours do you use device %ROWNUM2% for lighting and other applications each day?

NUMERIC: INTEGER C144e

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24.

C145 - What is the most serious problem you experienced with device %ROWNUM2%?

SINGLE-SELECT C145

001 ○ Duration of service too short
002 ○ Too expensive
003 ○ Cannot power large appliances
004 ○ Breaks too often
005 ○ Maintenance and availability of spare parts
006 ○ Quality of light
007 ○ Battery problems
555 ○ Other
111 ○ No problems

C145_other - Other (Specify).

TEXT C145 other

E `C145==555`

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY / SOLAR BASED DEVICES / ROSTER OF SOLAR BASED DEVICES

MAIN SOLAR BASED DEVICE

E `ROWNUM2==1`

C146 - Are there certain months every year when the service is not as strong from device %ROWNUM2%?

SINGLE-SELECT C146

00 ○ No
01 ○ Yes

C147 - What are the worst months for service from [device %ROWNUM2%?

MULTI-SELECT C147

I Multiple answers. Record all months for the lowest hours of service.
E `C146==1`
V1 `self.ContainsOnly(888) || (self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && !self.Contains(888))`
M1 Cannot select any other code with "Don't know".

001 ☐ January
002 ☐ February
003 ☐ March
004 ☐ April
005 ☐ May
006 ☐ June
007 ☐ July
008 ☐ August
009 ☐ September
010 ☐ October
011 ☐ November
012 ☐ December
888 ☐ Don’t Know

C148a - How many hours do you receive service from this device %ROWNUM2% each day and night in the worst months?

NUMERIC: INTEGER C148a

I Hours. 888 = Don't know.
E `C146==1`
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.

C148b - How many hours do you receive service from this device %ROWNUM2% each day and night in typical month?

NUMERIC: INTEGER C148b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `(C146==1 && C148a==888) || (C146==1 && C148a<=24 && self >=C148a) || C146==0`
M2 Must be higher or equal to the %C148a% hours of electricity available per day in worst months.

C149a - How many hours is service available from this device %ROWNUM2% each evening, from 6:00 pm to 10:00 pm in the worst months?

NUMERIC: INTEGER C149a

I Hours. 888 = Don't know.
E `C146==1`
V1 `(self>=0 && self<=4) || self==888`
M1 Must be comprised between 0 and 4 hours.
V2 `C148a==888 || (C148a<=24 && self<=C148a)`
M2 Must be lower or equal to the %C148a% hours of electricity available p er day in worst months.

C149b - How many hours is service available from this device %ROWNUM2% each evening, from 6:00 pm to 10:00 pm in a typical month?

NUMERIC: INTEGER C149b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=4) || self==888`
M1 Must be comprised between 0 and 4 hours.
V2 `C148b==888 || (C148b<=24 && self<=C148b)`
M2 Must be lower or equal to the %C148b% hours of electricity available p er day in a typical month.
V3 `(C146==1 && C149a==888) || (C146==1 && C149a<=4 && self> =C149a) || C146==0`
M3 Must be higher or equal to the %C149a% hours of electricity available i n the evening in worst months.

C150a - How many hours do you actually use the device %ROWNUM2% each day for lighting and other applications in the worst months?

NUMERIC: INTEGER C150a

I Hours. 888 = Don't know.
E `C146==1`
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `C148a==888 || (C148a<=24 && self<=C148a)`
M2 Must be lower or equal to the %C148a% hours of electricity available p er day in worst months.

C150b - How many hours do you actually use the device %ROWNUM2% each day for lighting and other applications in a typical month?

NUMERIC: INTEGER C150b

I Hours. 888 = Don't know.
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.
V2 `C148b==888 || (C148b<=24 && self<=C148b)`
M2 Must be lower or equal to the %C148b% hours of electricity available p er day in a typical month.

C151 - In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the device %ROWNUM2%?

SINGLE-SELECT C151

00 ○ No
01 ○ Yes

C152 - Is there any electric appliance you do not have that you would like to have?

SINGLE-SELECT C152

000 ○ No
001 ○ Yes
888 ○ Don't know

C153 - What devices would you most like to have?

I Multiple answers. Record up to three devices.
E C152==1
V1 self.ContainsOnly(888) || (self.ContainsAny(1,2,3,4,5,6,555) && !self.Contains(888))
M1 Cannot select any other answer with "Don't know/refuse to answer".

MULTI-SELECT C153
001 ☐ Television
002 ☐ Fan
003 ☐ Refrigerator
004 ☐ Radio
005 ☐ Tablet/laptop/computer
006 ☐ Mobile phone charger
555 ☐ Other
888 ☐ Don't know/refuse to answer

C153_other - Other (Specify).

E C153.Contains(555)

TEXT C153_other

C154 - Overall, how satisfied are you with the service provided by the main solar device?

SINGLE-SELECT C154
01 ○ Very satisfied
02 ○ Somewhat satisfied
03 ○ Neutral
04 ○ Unsatisfied
05 ○ Very unsatisfied

C155 - In what year did you get your first solar device?

I Year. 888 = Don't know.
V1 (self>=1980 && self<=2017) || self==888
M1 Must be comprised between 1980 and 2017.

NUMERIC: INTEGER C155

C156 - Has solar been your main source of lighting or electricity since %C155%?

E IsAnswered(C155) && C155!=888

SINGLE-SELECT C156
000 ○ No
001 ○ Yes
888 ○ Don't know

C157 - What was your main source of lighting or electricity when it was not a solar device?

E C156==0 || C156==888 || C155==888

SINGLE-SELECT C157
001 ○ National grid connection
002 ○ Local mini grid connection
003 ○ Electric generator
004 ○ Rechargeable battery and storage devices (e.g. car battery)
005 ○ Pico-hydro
006 ○ Kerosene lamp
007 ○ Fuel-based lighting
008 ○ Dry-cell (non-rechargeable) battery / Torch / Flashlight
009 ○ Candle
555 ○ Other

C157_other - Other (Specify).

E C157==555

TEXT C157 other

C158 - Compared to the first time you used solar lighting, do you currently...

I Prompt.

SINGLE-SELECT C158
001 ○ Use more solar lighting
002 ○ Use about the same solar lighting
003 ○ Use less solar lighting
888 ○ Don't know

C159 - What appliances do you use today that you did not use with your first solar lighting device?

V1 self.ContainsOnly(6) || (self.ContainsAny(1,2,3,4,5,555) && !self.Contains(6))
M1 Cannot select any other code with "No change".

MULTI-SELECT C159
001 ☐ Mobile phone charger
002 ☐ Radio
003 ☐ TV
004 ☐ Fan
005 ☐ Refrigerator

006 ☐ No change
555 ☐ Other

C159_other - Other (Specify).

E C159.Contains(555)

TEXT C159_other

C168 - In the last 12 months, did the household use a biodigester to supply electricity?

SINGLE-SELECT C168
00 ○ No
01 ○ Yes

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY

BIODIGESTER

E C168==1

C169 - What was the total cost of the biodigester?

I Riels. 888 = Don't know
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER C169

C170 - Did you benefit from subsidies when you bought it?

SINGLE-SELECT C170
000 ○ No
001 ○ Yes
888 ○ Don't know

C171 - How much did you household eventually pay?

I Riels. Without the subsidies. 888 = Don't know
E C170==1
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER C171

C172 - Which company did you buy the biodigester from?

SINGLE-SELECT C172
001 ○ National Biodigester Program
002 ○ ATEC Biodigester
555 ○ Other

Q172_other - Other (Specify).

E C172==555

TEXT C172_other

C173 - Did you pay for the biodigester in one time or several times?

SINGLE-SELECT C173
01 ○ In one time
02 ○ Under installments

C174 - How many times did you pay under installment?

I 888 = Don't know or Don't remember
E C173==2
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C174

C175 - Did you borrow money to pay for the biodigester?

SINGLE-SELECT C175
000 ○ No
001 ○ Yes
888 ○ Don't know

C176 - In the last 12 months, how much did you pay for repairs/parts/maintenance of the biodigester?

NUMERIC: INTEGER C176

I Riels. 888 = Don't know 0 = Did not pay for repair or maintenance
V1 `self==0 || self>=100`
M1 Please enter a valid monetary value, higher or equal to 0.

C177 - Did you receive information and training on the biodigester?

SINGLE-SELECT C177
000 ○ No
001 ○ Yes
888 ○ Don't know

C178 - How big is your biodigester?

I In cubic meter. 888 = Don't know
V1 `self>=0`
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C178

C179 - F or how many years have you used the biodigester?

I Years. 1 = one year or less than one year 888 = Don't know
V1 `self>=0`
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C179

C180 - Is your toilet connected to the biodigester?

SINGLE-SELECT C180
000 ○ No
001 ○ Yes
888 ○ Don't know

C181 - How many light bulbs can you power with the biodigester?

I Number of light bulbs. 888 = Don't know
V1 `self>=0`
M1 Must be higher or equal to 0.

NUMERIC: INTEGER C181

C182 - How many hours per day do you use electricity from the biodigester for lighting?

I Hours. 888 = Don't know
V1 `(self>=0 && self<=24) || self==888`
M1 Must be comprised between 0 and 24 hours.

NUMERIC: INTEGER C182

C183 - Are there certain months/seasons of the year when it is more difficult to get electricity for lighting from the biodigester?

SINGLE-SELECT C183
00 ○ No
01 ○ Yes

C184 - What are the worst months to get power from the biodigester?

I Multiple responses are possible. Record all months for the worst fuel availability.
E `C183==1`
V1 `self.ContainsOnly(888) || (self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && !self.Contains(888))`
M1 Cannot select any other code with "Don't know".

MULTI-SELECT C184
001 ☐ January
002 ☐ February
003 ☐ March
004 ☐ April
005 ☐ May
006 ☐ June
007 ☐ July
008 ☐ August
009 ☐ September
010 ☐ October
011 ☐ November
012 ☐ December
888 ☐ Don’t know

C185a - How many hours of lighting could you use from the biodigester each day and night if you wanted to in worst months?

E `C183==1`
V1 `(self>=0 && self<=24) || self==888`

NUMERIC: INTEGER C185a

M1 Must be comprised between 0 and 24 hours.

C185b - How many hours of lighting could you use from the biodigester each day and night if you wanted to in a typical month?

NUMERIC: INTEGER C185b

V1 `(C183==1 && C185a==888) || (C183==1 && C185a<=24 && self >=C185a) || C183==0`

M1 Must be higher or equal to the %C185a% hours of electricity available i n worst months.

V2 `(self>=0 && self<=24) || self==888`

M2 Must be comprised between 0 and 24 hours.

C186a - How many hours of lighting could you use from the biodigester each evening, from 6:00 pm to 10:00 pm if you wanted to in worst months?

NUMERIC: INTEGER C186a

E `C183==1`

V1 `(self>=0 && self<=4) || self==888`

M1 Mus tbe comprised between 0 and 4 hours.

V2 `C185a==888 || (C185a<=24 && self<=C185a)`

M2 Must be lower or equal to the %C185a% hours of electricity available p er day in worst month.

C186b - How many hours of lighting could you use from the biodigester each evening, from 6:00 pm to 10:00 pm if you wanted to in a typical month?

NUMERIC: INTEGER C186b

V1 `(self>=0 && self<=4) || self==888`

M1 Must be comprised between 0 and 4 hours.

V2 `C185b==888 || (C185b<=24 && self<=C185b)`

M2 Must be lower or equal to the %C185b% hours of electricity available p er day in a typical month.

V3 `(C183==1 && C186a==888) || (C183==1 && C186a<=4 && self>=C186a) || C183==0`

M3 Must be higher or equal to the %C186a% hours of electricity available at evening in worst months.

C187a - How many hours of lighting do you actually use from the biodigester each day in worst months?

NUMERIC: INTEGER C187a

E `C183==1`

V1 `(self>=0 && self<=24) || self==888`

M1 Must be comprised between 0 and 24 hours.

V2 `C185a==888 || (C185a<=24 && self<=C185a)`

M2 Must be lower or equal to the %C185a% hours of electricity available p er day in worst months.

C187a - How many hours of lighting do you actually use from the biodigester each day in a typical?

NUMERIC: INTEGER C187b

V1 `(self>=0 && self<=24) || self==888`

M1 Must be comprised between 0 and 24 hours.

V2 `C185b==888 || (C185b<=24 && self<=C185b)`

M2 Must be lower or equal to the %C185b% hours of electricity available p er day in a typcial month.

C188 - What are the most serious problems you experience with the biodigester?

MULTI-SELECT C188

I Record up to 2 responses.

V1 `self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5,555) && !self.Contains(111))`

M1 Cannot select any other code with "No problems".

- 001 ☐ Difficult to find manure to feed the biodigester
- 002 ☐ Too expensive
- 003 ☐ Problems with floods
- 004 ☐ Insufficient amount of electricity produced
- 005 ☐ Maintenance & repair is difficult
- 555 ☐ Other, specify

	111 ☐ No problems
C188_other - Other (Specify). E C188.Contains(555)	TEXT C188_other .....
C189 - In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the biodigester?	SINGLE-SELECT C189 00 ○ No 01 ○ Yes

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY

MAIN SOURCE OF ELECTRICITY

C160 - What is your household main source of electricity?	SINGLE-SELECT C160 001 ○ Grid Connection 003 ○ Electric generator 004 ○ Solar Home System 005 ○ Solar Lantern/Lighting System 006 ○ Rechargeable Battery 007 ○ Pico-Hydro 008 ○ Dry-cell battery 009 ○ Biodigester 010 ○ Gasifier (rice husk, coconut husk, etc.) 111 ○ No electricity 555 ○ Other
C160_other - Other (Specify). E C160==555	TEXT C160_other .....
C161 - How many mobile phones do your household members own in total? I 0 = None E IsAnswered(C160) && C160!=111 V1 self>=0 M1 Must be higher or equal to 0.	NUMERIC: INTEGER C161 -

SECTION C - SUPPLY AND DEMAND OF ELECTRICITY / MAIN SOURCE OF ELECTRICITY

CHARGING MOBILE PHONES

E C161>0

C162 - Are members of your household able to charge a mobile phone inside your dwelling?	SINGLE-SELECT C162 00 ○ No 01 ○ Yes
C163 - Are members of your household able to charge all their mobile phones as often as they need inside your dwelling? E C162==1	SINGLE-SELECT C163 000 ○ No 001 ○ Yes 888 ○ Don't know
C164 - Can you charge at least one mobile phone to full charge everyday inside your dwelling? E C162==1	SINGLE-SELECT C164 00 ○ No 01 ○ Yes
C165 - Can you charge at least one mobile phone to full charge in 3 days inside your dwelling?	SINGLE-SELECT C165 00 ○ No 01 ○ Yes

E C164==0

C166 - How many mobile phones do your household members charge outside your dwelling?

NUMERIC: INTEGER C166

I Number of mobile phones.
E C164==0 || C162==0
V1 self>=0 && self<=C161
M1 Must be comprised between 0 and %C161%.

C167 - Do members of your household have to go more than 500 meters to charge your mobile phones outside your dwelling?

SINGLE-SELECT C167
00 ○ No
01 ○ Yes

I Equivalent to walk for more than 5 minutes.
E C166>0

SECTION D - WILLINGNESS TO PAY FOR A GRID CONNECTION

VARIABLE

```
100*Math.Round( (Quest.IRnd() < 0.14) ? (0) : ((Quest.IR
nd() >= 0.14 && Quest.IRnd() < 0.29) ? (0.14*122000/100)
: ((Quest.IRnd() >= 0.29 && Quest.IRnd() < 0.43) ? (0.29
*122000/100) : ((Quest.I
```

And 226 other symbols [1]

DOUBLE GRIDFEE

VARIABLE

```
100*Math.Round( (Quest.IRnd() < 0.14) ? (0) : ((Quest.IR
nd() >= 0.14 && Quest.IRnd() < 0.29) ? (0.14*122000/300)
: ((Quest.IRnd() >= 0.29 && Quest.IRnd() < 0.43) ? (0.29
*122000/300) : ((Quest.I
```

And 226 other symbols [2]

DOUBLE GRIDFEE3

VARIABLE

```
100*Math.Round( (Quest.IRnd() < 0.14) ? (0) : ((Quest.IR
nd() >= 0.14 && Quest.IRnd() < 0.29) ? (0.14*122000/600)
: ((Quest.IRnd() >= 0.29 && Quest.IRnd() < 0.43) ? (0.29
*122000/600) : ((Quest.I
```

And 226 other symbols [3]

DOUBLE GRIDFEE6

VARIABLE

```
100*Math.Round( (Quest.IRnd() < 0.14) ? (0) : ((Quest.IR
nd() >= 0.14 && Quest.IRnd() < 0.29) ? (0.14*122000/1200
) : ((Quest.IRnd() >= 0.29 && Quest.IRnd() < 0.43) ? (0.
29*122000/1200) : ((Quest
```

And 232 other symbols [4]

DOUBLE GRIDFEE12

D2 - Respondent ID

SINGLE-SELECT: LINKED D2

STATIC TEXT

I would like to ask you questions only about the connection fee – 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.>

D3a - Would you be willing to get connected to the national electricity grid if the connection fee was free?

SINGLE-SELECT D3a
00 ○ No
01 ○ Yes

E Quest.IRnd()<0.14

D3 - Would you be willing to pay %GRIDFEE% riels for an electricity connection?

E `Quest.IRnd()>=0.14`

SINGLE-SELECT D3

00 ○ No
01 ○ Yes

D4 - Would you be willing to pay %GRIDFEE% riels for an electricity connection, if you were given 3 months to make the payment? This means that you would pay %GRIDFEE3% riels per month for 3 months.

E `D3==0`

SINGLE-SELECT D4

000 ○ No
001 ○ Yes
888 ○ Don't know

D6 - Would you be willing to pay %GRIDFEE% riels for an electricity connection, if you were given 6 months to make the payment? This means that you would pay %GRIDFEE6% riels per month for 6 months.

E `D4==0 || D4==888`

SINGLE-SELECT D6

000 ○ No
001 ○ Yes
888 ○ Don't know

D8 - Would you be willing to pay %GRIDFEE% riels for an electricity connection, if you were given 12 months to make the payment? This means that you would pay %GRIDFEE12% riels per month for 12 months.

E `D6==0 || D6==888`

SINGLE-SELECT D8

000 ○ No
001 ○ Yes
888 ○ Don't know

D10 - If the connection fee were waived, would you get a grid connection?

E `D8==0 || D8==888`

SINGLE-SELECT D10

000 ○ No
001 ○ Yes
888 ○ Don't know

D11 - Why would you not accept the previous offers?

E `D3a==0 || D4==0 || D6==0 || D8==0 || D10==0`

SINGLE-SELECT D11

001 ○ Cannot afford the wiring costs
002 ○ Cannot afford the connection fee
003 ○ Do not need electricity
004 ○ Electricity service is unreliable
005 ○ Monthly fee is too expensive
555 ○ Other, specify

D11_other - Other (Specify).

E `D11==555`

TEXT D11_other

D12 - How much do you think it would cost to do all the internal electrical wiring in your house?

I Riels. 888 = Don't know.
V1 `self==0 || self>=100`
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER D12

D13 - 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?

I Riels. 888 = Don't know.
V1 `self==0 || self>=100`
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER D13

SECTION E - WILLINGNESS TO PAY FOR SOLAR DEVICE

VARIABLE

```
Quest.IRnd()
```

DOUBLE — RANDOM

VARIABLE

```
100*Math.Round( (Quest.IRnd() < 0.166) ? 0.33*1600000/10
0 : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (
0.66*1600000/100) : ((Quest.IRnd() >= 0.333 && Quest.IRn
d() < 0.5) ? (1600000/100)
```

And 168 other symbols [5]

DOUBLE — SOLARFEE

VARIABLE

```
100*Math.Round( (Quest.IRnd() < 0.166) ? 0.33*1600000/60
0 : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (
0.66*1600000/600) : ((Quest.IRnd() >= 0.333 && Quest.IRn
d() < 0.5) ? (1600000/600)
```

And 168 other symbols [6]

DOUBLE — SOLARFEE6

VARIABLE

```
100*Math.Round( (Quest.IRnd() < 0.166) ? 0.33*1600000/12
00 : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ?
(0.66*1600000/1200) : ((Quest.IRnd() >= 0.333 && Quest.I
Rnd() < 0.5) ? (1600000/120
```

And 174 other symbols [7]

DOUBLE — SOLARFEE12

VARIABLE

```
100*Math.Round( (Quest.IRnd() < 0.166) ? 0.33*1600000/24
00 : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ?
(0.66*1600000/2400) : ((Quest.IRnd() >= 0.333 && Quest.I
Rnd() < 0.5) ? (1600000/240
```

And 174 other symbols [8]

DOUBLE — SOLARFEE24

E2 - Respondent ID

SINGLE-SELECT: LINKED — E2

STATIC TEXT

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.
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.

E3 - Would you be willing to pay %SOLARFEE% riels for this solar device?

SINGLE-SELECT — E3

- 00 ○ No
- 01 ○ Yes

E4 - Would you be willing to pay %SOLARFEE% riels for this solar device, if you were given 6 months to make the payment? This means that you would pay %SOLARFEE6% riels per month for 6 months.

E `E3 == 0`

SINGLE-SELECT — E4

- 000 ○ No
- 001 ○ Yes
- 888 ○ Don't know

E6 - Would you be willing to pay %SOLARFEE% riels for this solar device, if you were given 12 months to make the payment? This means that you would pay %SOLARFEE12% riels per month for 12 months.

E `E4==0 || E4==888`

SINGLE-SELECT — E6

- 000 ○ No
- 001 ○ Yes
- 888 ○ Don't know

E8 - Would you be willing to pay %SOLARFEE% riels for this solar device, if you were given 24 months to make the payment? This means that you would pay %SOLARFEE24% riels per month for 24 months.

SINGLE-SELECT — E8

- 000 ○ No
- 001 ○ Yes
- 888 ○ Don't know

E E6==0 || E6==888

E9 - Why would you not accept the previous offers?

E E4==0 || E6==0 || E8==0

SINGLE-SELECT E9

001 ○ Cannot afford the payment
002 ○ Do not need electricity
003 ○ Maintenance/servicing of device is not available
555 ○ Other

E9_other - Other (Specify).

E E9==555

TEXT E9_other

SECTION F - KEROSENE/FUEL-BASED/CANDLE LIGHTING

F1 - Respondent ID

SINGLE-SELECT: LINKED F1

F3 - Which of the following types of lamps did you use at least once in the last 12 months for lighting purpose only?

I Multiple answers. Use showcards to identify lamp type. Do not include candles used for praying.
V1 self.ContainsOnly(5) || (self.ContainsAny(1,2,3,4) && !self.Contains(5))
M1 Cannot select none with other options.

MULTI-SELECT F3

01 ☐ Candle
02 ☐ Open wick lamp
03 ☐ Hurricane lamp with glass cover
04 ☐ Pressurized mantle lamp
05 ☐ None

SECTION F - KEROSENE/FUEL-BASED/CANDLE LIGHTING

Roster: ROSTERF

generated by multi-select question F3

ROSTERF

E @rowcode == 1 ||@rowcode == 2 || @rowcode == 3 || @rowcode == 4

F4 - What is the main fuel source for %ROSTERF%?

E @rowcode == 2 || @rowcode == 3 || @rowcode == 4 || @rowcode == 555

SINGLE-SELECT F4

001 ○ Kerosene / paraffin
002 ○ Diesel
003 ○ Gasoline
004 ○ Biogas
555 ○ Other

F4_other - Other (Specify).

E F4==555

TEXT F4 other

F5 - How many of these lamps does your household have?

I Number of lamps. 888 = Don't know.
E @rowcode == 2 || @rowcode == 3 || @rowcode == 4
V1 self>0
M1 Must have 1 or more %ROSTERF%.

NUMERIC: INTEGER F5

F6 - How much did you pay for each %ROSTERF%?

I If paying in installment, enter total value of all payments. If more than 1 device, input the average. Riels. 0 = Did not pay 888 = Don't know.
E @rowcode == 2 || @rowcode == 3 || @rowcode == 4
V1 self == 0 || self > 99
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER F6

F7 - How often have you been using %ROSTERF% for lighting in the last 12 months?

NUMERIC: INTEGER F7

I 888 = Don't know.
V1 `self>0`
M1 Must be higher than 0.

F7_unit - DO NOT READ: Record unit of time given by the respondent.

E `IsAnswered(F7) && F7!=888`

SINGLE-SELECT F7_unit

001 ○ Per day
002 ○ Per week
003 ○ Per month
004 ○ Per year
555 ○ Other

F7_unit_other - Other (Specify).

E `F7_unit==555`

TEXT F7_unit_other

F9 - When you use %ROSTERF% for lighting, on average how long do you use it for?

I Hours. 1 = one hour or less
V1 `self >= 1`
M1 Must be higher or equal to 1.

NUMERIC: INTEGER F9

F10a - In that period of time, how many candles do you typically use?

I Number of candles. 888 = Don't know. 1 = One candle or less
E `@rowcode==1`
V1 `self>=1`
M1 Must be higher or equal to 1.

NUMERIC: INTEGER F10a

F10b - In that period of time, how much %F4% do you typically use?

I In cL. 100 cL = 1 L 888 = Don't know.
E `@rowcode==2 || @rowcode==3 || @rowcode==4`
V1 `self>0`
M1 Must be higher than 0.

NUMERIC: INTEGER F10b

F11a - How many candles do you usually buy at a time?

I Number of candles. 888 = Don't know
E `@rowcode==1`
V1 `self > 0`
M1 Must be higher than 0.

NUMERIC: INTEGER F11a

F11b - How much do you usually pay for %F11a% candles?

I Riels. 888 = Don't know
E `@rowcode==1 && IsAnswered(F11a) && F11a!=888`
V1 `self==0 || self>=100`
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER F11b

F11c - How much is one liter of %F4%?

I Riels. 888 = Don't know
E `@rowcode==2 || @rowcode==3 || @rowcode==4`
V1 `self >= 100`
M1 Please enter a valid monetary value, higher or equal to 100 riels.

NUMERIC: INTEGER F11c

F12 - What do you dislike most about using %ROSTERF%?

I Record up to 2 responses.
V1 `self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5,6,7,555) && !self.Contains(111))`
M1 Cannot select no problems with other answers.

MULTI-SELECT F12

001 ☐ Lantern/candle too expensive
002 ☐ Fuel too expensive
003 ☐ Fuel not available
004 ☐ Accidents can happen
005 ☐ Bad for health

007 ☐ Time spent to collect fuel
555 ☐ Other
111 ☐ No problems

F12_other - Other (Specify).

E `F12.Contains(555)`

TEXT F12_other

F13 - In the last 12 months, what type of harm or injury did any household members have from %ROSTERF%?

I Multiple answers.
V1 `self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5,6,7,8) && !self.Contains(111))`
M1 Cannot select "none" with other answers.

MULTI-SELECT F13

001 ☐ Death or permanent limb damage
002 ☐ Burns/fire
003 ☐ Poisoning
004 ☐ Eye problems
005 ☐ Respiratory problem
006 ☐ Other major injury
007 ☐ Minor injury
111 ☐ None

F14 - What is the main source of lighting the children who are currently enrolled in school usually use for studying or doing homework?

E `IsAnswered(F3) && !F3.Contains(5) && $ATTEND`

SINGLE-SELECT F14

001 ○ Electric lighting/lamp
002 ○ Solar powered light source
003 ○ Battery-operated light source
004 ○ Street lighting
005 ○ Kerosene lamp
006 ○ Candles
007 ○ Biogas lamps
555 ○ Other
111 ○ Studying and homework only during daylight hours

F14_other - Other (Specify).

E `F14==555`

TEXT F14 other

SECTION G - DRY-CELL BATTERIES

G1 - Respondent ID

SINGLE-SELECT: LINKED G1

G3 - In the last 12 months, which of the following devices have you used with dry cell batteries?

I Multiple answers. Prompt. Only record devices working on NON-RECHARGEABLE dry cell batteries.
V1 `self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4) && !self.Contains(111))`
M1 Cannot select any other answer with "None".

MULTI-SELECT G3

001 ☐ Lanterns
002 ☐ Flashlights
003 ☐ Task lights
004 ☐ Radio
111 ☐ None

SECTION G - DRY-CELL BATTERIES
Roster: ROSTERG
generated by multi-select question G3

ROSTERG

E `@rowcode==1 || @rowcode==2 || @rowcode==3||@rowcode==4`

G4 - How many of %ROSTERG% does your household power with dry cell batteries?

I Number of devices.
V1 `self>0`
M1 Must be higher than 0

NUMERIC: INTEGER G4

NUMERIC: INTEGER G5

G5 - How much did you pay for each %ROSTERG% on average?

I If paying in installment, enter total value of all payments. If more than 1 device, input the average. Riels. 888 = Don't know.
V1 `self>99 || self==0`
M1 Must be 100 riels or more or 0 if did not pay anything.

G6 - How often have you been using %ROSTERG% in the last 12 months?

NUMERIC: INTEGER G6

I Record number. 888 = Don't know
V1 `self > 0`
M1 Must be higher than 0.

G6_unit - DO NOT READ: Record unit of time given by the respondent.

SINGLE-SELECT G6 unit

E `IsAnswered(G6) && G6!=888`

001 ○ Per day
002 ○ Per week
003 ○ Per month
004 ○ Per year
555 ○ Other

G6_unit_other - Other (Specify).

TEXT G6_unit_other

E `G6_unit==555`

G7 - When you use %ROSTERG%, on average how long do you use it for?

NUMERIC: INTEGER G7

I Hours. 1 = One hour or less
V1 `self>=1`
M1 Must be higher or equal to 1.

G8 - How many batteries does %ROSTERG% require?

NUMERIC: INTEGER G8

I Number of batteries per device.
V1 `self>=0`
M1 Must be higher or equal to 0.

G9 - How often do you change dry cell batteries for %ROSTERG%?

NUMERIC: INTEGER G9

I Record number. 888 = Don't know.
V1 `self > 0`
M1 Must be higher than 0.

G9_unit - DO NOT READ: Record unit of time given by the respondent.

SINGLE-SELECT G9_unit

E `IsAnswered(G9) && G9!=888`

001 ○ Per day
002 ○ Per week
003 ○ Per month
004 ○ Per year
555 ○ Other

G9_unit_other - Other (Specify).

TEXT G9_unit_other

E `G9_unit==555`

G10 - Do you use %ROSTERG% as a regular source of lighting or only as a back-up source when the main source is not available?

SINGLE-SELECT G10

01 ○ Regular source of lighting
02 ○ Back-up source of lighting

G11 - When you buy dry cell batteries for the devices mentioned before, how many do you usually buy at a time?

NUMERIC: INTEGER G11

I Number of batteries purchased at a time. 888 = Don't know.

E IsAnswered(G3) && !G3.Contains(111)
V1 self > 0
M1 Must be higher than 0.

G12 - How much do you usually spend when purchasing these %G11% batteries?

NUMERIC: INTEGER G12

I Riels. 888 = Don't know.
E IsAnswered(G11) && G11!=888
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

SECTION H - HOUSEHOLD FUEL CONSUMPTION

H1 - Respondent ID

SINGLE-SELECT: LINKED H1

H3 - Which of the following fuels has your household been using in the last 12 months?

I Multiple answers. Prompt.

MULTI-SELECT H3

- 01 ☐ LPG / cooking gas
- 02 ☐ Wood purchased
- 03 ☐ Wood collected
- 04 ☐ Charcoal
- 05 ☐ Solar
- 06 ☐ Kerosene
- 07 ☐ Animal waste / Dung
- 08 ☐ Crop Residue / Plant Biomass
- 09 ☐ Biomass Briquette
- 10 ☐ Electric
- 11 ☐ Pellets / processed biomass / wood chips
- 12 ☐ Biogas

SECTION H - HOUSEHOLD FUEL CONSUMPTION

Roster: ROSTERH

generated by multi-select question H3 ROSTERH

H4 - In the last 12 months, what did your household use %ROSTERH% for?

I Multiple answers. Prompt.

MULTI-SELECT H4

- 001 ☐ Lighting
- 002 ☐ Cooking
- 003 ☐ Boiling water
- 004 ☐ Home based income activity
- 555 ☐ Other

H4_other - Other (Specify).

E H4.Contains(555)

TEXT H4 other

H10a - Did you use this %ROSTERH% each month for the past 12 months?

E @rowcode!=10

SINGLE-SELECT H10a

- 00 ○ No
- 01 ○ Yes

H10 - In the last 12 months, in which months did you use this %ROSTERH%?

I Multiple answers.
E H10a==0

MULTI-SELECT H10

- 01 ☐ January
- 02 ☐ February
- 03 ☐ March
- 04 ☐ April
- 05 ☐ May
- 06 ☐ June
- 07 ☐ July
- 08 ☐ August
- 09 ☐ September

10 ☐ October
11 ☐ November
12 ☐ December

H11a - In the last 12 months, has there been a time where %ROSTERH% was scarce and/or significantly more expensive?

E `@rowcode!=10 && @rowcode!=12 && @rowcode!=5`

SINGLE-SELECT H11a

00 ○ No
01 ○ Yes

H11 - In the last 12 months, in which months was this %ROSTERH% scarce and/or significantly more expensive?

I Multiple responses possible
E `H11a==1`

MULTI-SELECT H11

01 ☐ January
02 ☐ February
03 ☐ March
04 ☐ April
05 ☐ May
06 ☐ June
07 ☐ July
08 ☐ August
09 ☐ September
10 ☐ October
11 ☐ November
12 ☐ December

H12 - In the last 7 days, how much %ROSTERH% did your household use?

I 0 = Not used in the past 7 days 888 = Don't know
E `@rowcode!=10 && @rowcode!=12 && @rowcode!=5`
V1 `self>=0`
M1 Must be higher or equal to 0.

NUMERIC: DECIMAL H12

H12_unit - DO NOT READ: Please select the unit mentioned by the respondent.

E `IsAnswered(H12) && H12!=888`

SINGLE-SELECT H12 unit

001 ○ Kg
002 ○ Liters
003 ○ Baal
004 ○ Kip
005 ○ Koyun/remork
555 ○ Other

H12_unit_other - Other (Specify).

E `H12_unit==555`

TEXT H12 unit other

H13 - In the last 30 days, how much %ROSTERH% did you purchase?

I Liters for Kerosene. Kg for all other fuels. 888 = Don't know
E `H12>0 && @rowcode!=10 && @rowcode!=12 && @rowcode!=5 && @rowcode!=3 && @rowcode!=7 && @rowcode!=8`

NUMERIC: INTEGER H13

H13_unit - DO NOT READ: Please select the unit mentioned by the respondent.

E `IsAnswered(H13) && H13!=888`

SINGLE-SELECT H13_unit

001 ○ Kg
002 ○ Liters
003 ○ Baal
004 ○ Kip
005 ○ Koyun/remork
555 ○ Other

H13_unit_other - Other (Specify).

E `H13_unit==555`

TEXT H13_unit_other

H14 - In the last 30 days, how much did you pay for this amount of %ROSTERH%?

I Riels.

NUMERIC: INTEGER H14

E H13>0 && @rowcode!=10 && @rowcode!=12 && @rowcode!=5 && @rowcode!=3 && @rowcode!=7 && @rowcode!=8

V1 self>99

M1 Must be 100 riels or more

SECTION I - USE OF COOKING SOLUTIONS

I1 - Who is the household member who is the most frequently in charge with cooking?

SINGLE-SELECT: LINKED I1

A12 - How frequently does %I1% cook food for the household?

SINGLE-SELECT A12

- 01 ○ Everyday
- 02 ○ A few times in a week
- 03 ○ Once a week
- 04 ○ A few times in a month
- 05 ○ Once a month
- 06 ○ Never

I2 - In the last 12 months how many cookstoves did you household use for preparing meals?

NUMERIC: INTEGER I2

I Number of stoves. 5 = 5 stoves or more.

V1 self<6

M1 Maximum of five stoves

STATIC TEXT

I will now ask you about the %I2% stoves you have used the most in the last 12 months, for preparing meals or boil water only, starting with your main stove.

SECTION I - USE OF COOKING SOLUTIONS

Roster: ROSTERI

generated by numeric question I2 ROSTERI

I3 - Which type of stove is stove %STOVENUM%?

SINGLE-SELECT I3

- 001 ○ Three-stone fire stove
- 002 ○ Mong/Siam stove
- 003 ○ Traditional Kampong Chhnang stove
- 004 ○ Traditional Lao stove
- 005 ○ Neang Kangrey stove
- 006 ○ New Lao stove
- 007 ○ Biogas stove
- 008 ○ LPG stove
- 009 ○ Electric stove (does not include rice cooker)
- 010 ○ Cement stove
- 011 ○ Prime stove
- 012 ○ Ace 1 stove
- 013 ○ Mimi-moto stove
- 014 ○ 3G stove
- 015 ○ TreXanh stove
- 016 ○ Electric rice cooker

And 1 other [7]

VARIABLE

@rowindex+1

LONG STOVENUM

I3_other - Other (Specify).

TEXT I3_other

E I3==555

I4 - How did you obtain this cookstove?

E I3>1

SINGLE-SELECT I4

01 ○ Purchased
02 ○ Receive for free

I5 - How much did you pay for this %ROSTERI%?

I Riels.
E I4==1
V1 self>99
M1 Please enter a valid monetary value, higher than 0.

NUMERIC: INTEGER I5

I6 - Who gave it to you?

E I4==2

SINGLE-SELECT I6

001 ○ Local private organizations (NGO)
002 ○ Village chief
003 ○ Local government
004 ○ Friend / relative
005 ○ Built by myself
555 ○ Other

I6_other - Other (Specify).

E I6==555

TEXT I6_other

I7 - Did you receive training or information on this cook-stove?

E I4==2

SINGLE-SELECT I7

00 ○ No
01 ○ Yes

I9 - Is this a metal stove?

E (I3>=7 && I3<=10) || I3==555

SINGLE-SELECT I9

00 ○ No
01 ○ Yes

I10 - How many working burners does this stove have?

I Number of burners.
E (I3>=7 && I3<=10) || I3==555

NUMERIC: INTEGER I10

I11 - If you want to sell this cookstove in your village today, how much would you receive?

I Riels. 0 = Could not sell 888 = Don't know
E I3>1
V1 self>99 || self==0
M1 Must be 100 riels or greater or 0 if could not sell.

NUMERIC: INTEGER I11

I12 - How long have you used this %ROSTERI% for?

I Months. If respondent gives answer in years, please convert to months . 0 = Less than one month.
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER I12

VARIABLE

(I12 < 12) ? (I12) : (12)

LONG MONTHUSE

I13a - Have you been using this stove every month for the past %MONTHUSE% months?

SINGLE-SELECT I13a

00 ○ No
01 ○ Yes

I13 - Which months have been using this %ROSTERI% in the past %MONTHUSE% months?

MULTI-SELECT I13

01 ☐ January

I Multiple answers.
E I13a==0
V1 COUNTMONTH<MONTHUSE
M1 Must be lower than %MONTHUSE%.

02 ☐ February
03 ☐ March
04 ☐ April
05 ☐ May
06 ☐ June
07 ☐ July
08 ☐ August
09 ☐ September
10 ☐ October
11 ☐ November
12 ☐ December

VARIABLE
I13.Count()

DOUBLE COUNTMONTH

I14 - Is the stove fixed in one place or moveable?

SINGLE-SELECT I14
01 ○ Fixed
02 ○ Moveable

I15 - In the last %MONTHUSE% months, where did you normally cook with this cookstove?

SINGLE-SELECT I15
001 ○ In dwelling, NOT in sleeping area
002 ○ In dwelling, in a sleeping area
003 ○ In a separate dwelling
004 ○ In a veranda (roofed platform with at least two open sides)
005 ○ Outdoors or under the house
555 ○ Other

I15_other - Other (Specify).

E I15==555

TEXT I15 other

I16 - Do you use a chimney, hood, other exhaust system while using this stove?

E I15!=4 && I15!=5 && I3!=16

SINGLE-SELECT I16
00 ○ No
01 ○ Yes

I17 - Do you regularly clean a chimney, hood or other exhaust system?

E I16==1

SINGLE-SELECT I17
00 ○ No
01 ○ Yes

I18a - In the last %MONTHUSE% months, what is the fuel you have used the most on this cookstove?

I Most used fuel.
F (@optioncode==1 && (I3==8 || I3==555)) || (@optioncode==2 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==3 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@option And 532 other symbols [1]

SINGLE-SELECT I18a
001 ○ LPG / cooking gas
002 ○ Wood purchased
003 ○ Wood collected
004 ○ Charcoal
005 ○ Solar
006 ○ Kerosene
007 ○ Animal Waste/Dung
008 ○ Crop Residue/Plant Biomass
009 ○ Biomass Briquette
010 ○ Electricity
011 ○ Processed biomass (pellets)/ woodchips
012 ○ Biogas
555 ○ Other

I18a_other - Other (Specify).

E I18a==555

TEXT I18a_other

I19a - In the last %MONTHUSE% months, how often was the %I18a% available?

SINGLE-SELECT I19a
01 ○ Always available
02 ○ Mostly available

I Prompt.

03 ○ Sometimes available
04 ○ Rarely available

I18b - In the last %MONTHUSE% months, did you use any other fuel on this cookstove?

SINGLE-SELECT I18b

00 ○ No
01 ○ Yes

I18c - In the last %MONTHUSE% months, what is the fuel you have used the second most on this cookstove?

I Second most used fuel.

F (@optioncode==1 && (I3==8 || I3==555)) || (@optioncode==2 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==3 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@option And 532 other symbols [2]

E I18b==1

V1 self!=I18a

M1 Cannot be the same as the main fuel.

SINGLE-SELECT I18c

001 ○ LPG / cooking gas
002 ○ Wood purchased
003 ○ Wood collected
004 ○ Charcoal
005 ○ Solar
006 ○ Kerosene
007 ○ Animal Waste/Dung
008 ○ Crop Residue/Plant Biomass
009 ○ Biomass Briquette
010 ○ Electricity
011 ○ Processed biomass (pellets)/ woodchips
012 ○ Biogas
555 ○ Other

I18c_other - Other (Specify).

E I18c==555

TEXT I18c_other

I19c - In the last %MONTHUSE% months, how often was the %I18c% available?

E I18b==1

SINGLE-SELECT I19c

01 ○ Always available
02 ○ Mostly available
03 ○ Sometimes available
04 ○ Rarely available

I20 - How much time do household members spend preparing this cookstove and fuel for each meal on average?

I Including setting up the fuel and turning on the stove but not including gathering fuel or cooking time. Minutes.

V1 self>=0

M1 Must be higher or equal to 0.

NUMERIC: INTEGER I20

I21 - In the last 7 days, how many days did your household use this cookstove?

I Days.

V1 self>=0 && self<8

M1 Must be 7 days or less.

NUMERIC: INTEGER I21

I22 - During one of these %I21% days, on average how many times did your household light or turn on this %ROSTERI%?

E I21>0

V1 self>=0

M1 Must be higher or equal to 0.

NUMERIC: INTEGER I22

I23 - During one of these %I21% days, for how long on average did your household use this cookstove to cook or reheat meals in the morning?

I Minutes. Do not include boiling water.

E I21>0

V1 self>=0

M1 Must be higher or equal to 0.

NUMERIC: INTEGER I23

I24 - During one of these %I21% days, for how long on average did your household use this cookstove to cook or reheat meals in the afternoon?

I Minutes. Do not include boiling water.
E I21>0
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER I24

I25 - During one of these %I21% days, for how long on average did your household use this cookstove to cook or reheat meals in the evening?

I Minutes. Do not include boiling water.
E I21>0
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER I25

I26 - During one of these %I21% days, for how long on average did your household use this cookstove to boil water?

I Minutes. For cooking, washing, and drinking.
E I21>0 && I3!=16
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER I26

I30 - In the last %MONTHUSE% months, what type of harm or injury did your household face from this cookstove?

I Multiple answers.
V1 self.ContainsOnly(9) || (self.ContainsAny(1,2,3,4,5,6,7,8) && !self.Contains(9))
M1 Cannot select none with other options.

MULTI-SELECT I30

- 01 ☐ Death or permanent damage
- 02 ☐ Burns/fire/poisoning
- 03 ☐ Severe cough/respiratory problem
- 04 ☐ Other major injury
- 05 ☐ Minor injury
- 06 ☐ Fire with no injury
- 07 ☐ Itchy/watery eyes
- 08 ☐ Light cough
- 09 ☐ None

I31 - Who decided to build or purchase this cookstove?

SINGLE-SELECT: LINKED I31

I33 - What do you think are the main disadvantages with using this %ROSTERI%?

I List up to 2 answers.
V1 self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5,6,7,8,9,10,555) && !self.Contains(111))
M1 Cannot select any other answer with "No disadvantage".

MULTI-SELECT I33

- 001 ☐ Electricity/fuel for this stove unavailable
- 002 ☐ Electricity/fuel for this stove too expensive
- 003 ☐ Certain type of cooking is not possible with this stove
- 004 ☐ Cookstove does not have enough burners
- 005 ☐ Cookstove flame is too weak
- 006 ☐ Stove takes a long time to cook food
- 007 ☐ Electricity/fuel takes a long time to prepare
- 008 ☐ Stove is difficult/inconvenient to use
- 009 ☐ I prefer another energy source but the electricity/fuel is too expensive or often not available
- 010 ☐ Certain type of meals taste better with another stove
- 111 ☐ No disadvantage

555 ☐ Other

I33_other - Other (Specify).

E I33.Contains(555)

TEXT I33_other

I35 - Record the rough shape of the cooking space

I Only for households using any solid fuel indoors.

E $MAINCOOKSTOVE && STOVENUM==1

SINGLE-SELECT I35

01 ○ Roughly square
02 ○ Roughly rectangular
03 ○ Roughly Circular
04 ○ Other shape

I36a - DO NOT READ: Record length of one side.

I In meters.

E I35==1

NUMERIC: DECIMAL I36a

I36b - DO NOT READ: Record length of long side.

I In meters.

E I35==2

NUMERIC: DECIMAL I36b

I36c - DO NOT READ: Record length of short side.

I In meters.

E I35==2

NUMERIC: DECIMAL I36c

I36d - DO NOT READ: Record length of diameter.

I In meters.

E I35==3

NUMERIC: DECIMAL I36d

I37 - DO NOT READ: Type of roof covering the cooking space.

E $MAINCOOKSTOVE && STOVENUM==1

SINGLE-SELECT I37

01 ○ Flat
02 ○ Roughly Conical
03 ○ Gable (triangular cross-section)
04 ○ Other shape

I38 - DO NOT READ: Estimate the height of the highest point of the ceiling.

I In meters.

E I37<=3

NUMERIC: DECIMAL I38

I39 - How many doors and windows does the cooking space have?

I Number of openings.

E $MAINCOOKSTOVE && STOVENUM==1

NUMERIC: INTEGER I39

I40 - Can I take a photo of this %ROSTERI%?

E I3==10 || I3==555

SINGLE-SELECT I40

00 ○ No
01 ○ Yes

I40_Photo - DO NOT READ: Take a photo of the stove.

E I40==1

PICTURE I40_Photo

I41a - How much do you spend on %I18a% for this stove in a typical month?

I Riels. Enter the actual amount spent, not the market value of the fuel.

NUMERIC: INTEGER I41a

E I18a!=3 && I18a!=5 && I18a!=7 && I18a!=12
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

I41b - How much do you spend on %I18c% for this stove in a typical month?

NUMERIC: INTEGER I41b

I Riels. Enter the actual amount spent, not the market value of the fuel.
E IsAnswered(I18c) && I18c!=3 && I18c!=5 && I18c!=7 && I18c!=12
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

SECTION J - WATER HEATING

J1 - Do you heat water for washing?

SINGLE-SELECT J1

I For example for washing dishes and clothes or for bathing, etc.

00 ○ No
01 ○ Yes

J2 - How do you mostly heat water?

SINGLE-SELECT J2

E J1==1

001 ○ Electric heater / boiler
002 ○ Electric kettle / coil
003 ○ Electric stove
004 ○ Gas heater
005 ○ Gas stove
006 ○ District heating
007 ○ Solar thermal system
008 ○ Same solid fuel stove used for cooking
009 ○ Separate solid fuel stove
555 ○ Other

J2_other - Other (Specify).

TEXT J2 other

E J2==555

J3 - What is the MAIN fuel you use in this stove?

SINGLE-SELECT J3

E J2==9

001 ○ LPG / cooking gas
002 ○ Wood purchased
003 ○ Wood collected
004 ○ Charcoal
005 ○ Solar
006 ○ Kerosene
007 ○ Animal waste / Dung
008 ○ Crop Residue / Plant Biomass
009 ○ Biomass Briquette
010 ○ Electric
011 ○ Pellets / processed biomass / wood chips
012 ○ Biogas
555 ○ Other

J3_other - Other (Specify).

TEXT J3 other

E J3==555

SECTION K - WILLINGNESS TO PAY FOR AN IMPROVED COOKSTOVE

VARIABLE

DOUBLE STOVEFEECHARCOAL

($NLS) ? (STOVEFEECHARCOALNLS) : (STOVEFEECHARCOALNONLS) ;

VARIABLE ($NLS) ? (STOVEFEECHARCOALNLS6) : (STOVEFEECHARCOALNONLS6);	DOUBLE STOVEFEECHARCOAL6
VARIABLE ($NLS) ? (STOVEFEECHARCOALNLS12) : (STOVEFEECHARCOALNONLS12);	DOUBLE STOVEFEECHARCOAL12
VARIABLE ($NLS) ? (STOVEFEECHARCOALNLS24) : (STOVEFEECHARCOALNONLS24);	DOUBLE STOVEFEECHARCOAL24
VARIABLE 100*Math.Round((Quest.IRnd() < 0.33) ? (0.33*60000/100) : ((Quest.IRnd() >= 0.33 && Quest.IRnd() < 0.66) ? (0.66*60000/100) : 60000/100) ,0);	DOUBLE STOVEFEECHARCOALNLS
VARIABLE 100*Math.Round((Quest.IRnd() < 0.33) ? (0.33*60000/600) : ((Quest.IRnd() >= 0.33 && Quest.IRnd() < 0.66) ? (0.66*60000/600) : 60000/600) ,0);	DOUBLE STOVEFEECHARCOALNLS6
VARIABLE 100*Math.Round((Quest.IRnd() < 0.33) ? (0.33*60000/1200) : ((Quest.IRnd() >= 0.33 && Quest.IRnd() < 0.66) ? (0.66*60000/1200) : 60000/1200) ,0);	DOUBLE STOVEFEECHARCOALNLS12
VARIABLE 100*Math.Round((Quest.IRnd() < 0.33) ? (0.33*60000/2400) : ((Quest.IRnd() >= 0.33 && Quest.IRnd() < 0.66) ? (0.66*60000/2400) : 60000/2400) ,0);	DOUBLE STOVEFEECHARCOALNLS24
VARIABLE 100*Math.Round((Quest.IRnd() < 0.167) ? (0.33*60000/100) : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*60000/100) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (60000/100) : And 162 other symbols [9]	DOUBLE STOVEFEECHARCOALNONLS
VARIABLE 100*Math.Round((Quest.IRnd() < 0.167) ? (0.33*60000/600) : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*60000/600) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (60000/600) : And 162 other symbols [10]	DOUBLE STOVEFEECHARCOALNONLS6
VARIABLE 100*Math.Round((Quest.IRnd() < 0.167) ? (0.33*60000/1200) : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*60000/1200) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (60000/1200) : And 168 other symbols [11]	DOUBLE STOVEFEECHARCOALNONLS12
VARIABLE 100*Math.Round((Quest.IRnd() < 0.167) ? (0.33*60000/2400) : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*60000/2400) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (60000/2400) : And 168 other symbols [12]	DOUBLE STOVEFEECHARCOALNONLS24
VARIABLE ($NKS) ? (STOVEFEEWOODNKS) : (STOVEFEEWOODNONKS);	DOUBLE STOVEFEEWOOD
VARIABLE ($NKS) ? (STOVEFEEWOODNKS6) : (STOVEFEEWOODNONKS6);	DOUBLE STOVEFEEWOOD6
VARIABLE ($NKS) ? (STOVEFEEWOODNKS12) : (STOVEFEEWOODNONKS12);	DOUBLE STOVEFEEWOOD12
VARIABLE	DOUBLE STOVEFEEWOOD24

($NKS) ? (STOVEFEEWOODNKS24) : (STOVEFEEWOODNONKS24);	
VARIABLE 100*Math.Round((Quest.IRnd() < 0.33) ? (0.33*160000/100) : ((Quest.IRnd() >= 0.33 && Quest.IRnd() < 0.66) ? (0. 66*160000/100) : 160000/100) ,0);	DOUBLE STOVEFEEWOODNKS
VARIABLE 100*Math.Round((Quest.IRnd() < 0.33) ? (0.33*160000/600) : ((Quest.IRnd() >= 0.33 && Quest.IRnd() < 0.66) ? (0. 66*160000/600) : 160000/600) ,0);	DOUBLE STOVEFEEWOODNKS6
VARIABLE 100*Math.Round((Quest.IRnd() < 0.33) ? (0.33*160000/120 0) : ((Quest.IRnd() >= 0.33 && Quest.IRnd() < 0.66) ? (0 .66*160000/1200) : 160000/1200) ,0);	DOUBLE STOVEFEEWOODNKS12
VARIABLE 100*Math.Round((Quest.IRnd() < 0.33) ? (0.33*160000/240 0) : ((Quest.IRnd() >= 0.33 && Quest.IRnd() < 0.66) ? (0 .66*160000/2400) : 160000/2400) ,0);	DOUBLE STOVEFEEWOODNKS24
VARIABLE 100*Math.Round((Quest.IRnd() < 0.2) ? (0.33*160000/100) : ((Quest.IRnd() >= 0.2 && Quest.IRnd() < 0.4) ? (0.66*1 60000/100) : ((Quest.IRnd() >= 0.4 && Quest.IRnd() < 0.6) ? (160000/100) : ((Que And 154 other symbols [13]	DOUBLE STOVEFEEWOODNONKS
VARIABLE 100*Math.Round((Quest.IRnd() < 0.2) ? (0.33*160000/600) : ((Quest.IRnd() >= 0.2 && Quest.IRnd() < 0.4) ? (0.66*1 60000/600) : ((Quest.IRnd() >= 0.4 && Quest.IRnd() < 0.6) ? (160000/600) : ((Que And 154 other symbols [14]	DOUBLE STOVEFEEWOODNONKS6
VARIABLE 100*Math.Round((Quest.IRnd() < 0.2) ? (0.33*160000/1200) : ((Quest.IRnd() >= 0.2 && Quest.IRnd() < 0.4) ? (0.66 *160000/1200) : ((Quest.IRnd() >= 0.4 && Quest.IRnd() < 0.6) ? (160000/1200) : ((And 160 other symbols [15]	DOUBLE STOVEFEEWOODNONKS12
VARIABLE 100*Math.Round((Quest.IRnd() < 0.2) ? (0.33*160000/2400) : ((Quest.IRnd() >= 0.2 && Quest.IRnd() < 0.4) ? (0.66 *160000/2400) : ((Quest.IRnd() >= 0.4 && Quest.IRnd() < 0.6) ? (160000/2400) : ((And 160 other symbols [16]	DOUBLE STOVEFEEWOODNONKS24
VARIABLE ($CHARCOAL) ? (STOVEFEECHARCOAL) : (($BIOMASS) ? (STOVEF EEWOOD) : 0);	DOUBLE STOVEFEE
VARIABLE ($CHARCOAL) ? (STOVEFEECHARCOAL6) : (($BIOMASS) ? (STOVE FEEWOOD6) : 0);	DOUBLE STOVEFEE6
VARIABLE ($CHARCOAL) ? (STOVEFEECHARCOAL12) : (($BIOMASS) ? (STOV EFEEWOOD12) : 0);	DOUBLE STOVEFEE12
VARIABLE ($CHARCOAL) ? (STOVEFEECHARCOAL24) : (($BIOMASS) ? (STOV EFEEWOOD24) : 0);	DOUBLE STOVEFEE24
VARIABLE new[]{ "KHROS", "NLS", "Prime Stove", "NKS" }[(long)STOV ECODE-1]	STRING STOVENAME
VARIABLE	DOUBLE STOVECODE

($CHARCOAL) ? (CODECHARCOAL) : (($BIOMASS) ? (CODEBIOMASS) : 0);	
VARIABLE ($NLS) ? (1) : ((Quest.IRnd() < 0.5) ? (1) : (2))	DOUBLE CODECHARCOAL
VARIABLE ($NKS) ? (3) : ((Quest.IRnd() < 0.6) ? (3) : (4))	DOUBLE CODEBIOMASS
K2 - Respondent ID	SINGLE-SELECT: LINKED K2

STATIC TEXT

DO NOT READ: Describe and explain the benefit of having a %STOVENAME% and present its features.
READ: This %STOVENAME% can reduce the smoke and fuel consumption significantly. Your cooking time per meal would most likely be shortened since the firepower of this cookstove is stronger than your current cookstoves. As you answer the next few questions, please keep in mind the various benefits from this device as well as your household budget.

K3 - Would you be willing to purchase this %STOVENAME% for %STOVEFEE% riels?

SINGLE-SELECT K3
- 00 ○ No
- 01 ○ Yes

K4 - Would you be willing to pay %STOVEFEE% riels for this stove, if you were given 6 months to make the payment? This means that you would pay %STOVEFEE6% riels per month for 6 months.

E K3==0

SINGLE-SELECT K4
- 000 ○ No
- 001 ○ Yes
- 888 ○ Don't know

K6 - Would you be willing to pay %STOVEFEE% riels for this %STOVENAME%, if you were given 12 months to make the payment? This means that you would pay %STOVEFEE12% riels per month for 12 months.

E K4==0

SINGLE-SELECT K6
- 000 ○ No
- 001 ○ Yes
- 888 ○ Don't know

K8 - Would you be willing to pay %STOVEFEE% riels for this %STOVENAME%, if you were given 24 months to make the payment? This means that you would pay %STOVEFEE24% riels per month for 24 months.

E K6==0

SINGLE-SELECT K8
- 000 ○ No
- 001 ○ Yes
- 888 ○ Don't know

K9 - Why would you not accept the previous offers?

E K4==0 || K6==0 || K8==0

SINGLE-SELECT K9
- 001 ○ Cannot afford the payment
- 002 ○ Do not need an improved cookstove
- 003 ○ Fuel for this stove is unreliable
- 555 ○ Other

K9_other - Other (Specify).

E K9==555

TEXT K9_other

SECTION L - CONSUMPTION / EXPENDITURE

STATIC TEXT

Interviewer Instructions: The Respondent should be the head of household.

CONSUMPTION

STATIC TEXT

In the last 7 days, what was the value of your consumption in...

L1 - Cereals & cereal products and starchy staples? I e.g.: rice, maize, wheat, flour, millet & e.g.: cassava, plantain, yam, coc oyam. Riels. 888 = Don't know V1 `self>99 || self == 0` M1 Must be 100 riels or higher or 0 if no spend.	NUMERIC: INTEGER L1
L2 - Pulses & nuts? I e.g.: beans, groundnuts, palm nuts, soy beans Riels. 888 = Don't know V1 `self>99 || self == 0` M1 Must be 100 riels or higher or 0 if no spend.	NUMERIC: INTEGER L2
L3 - Milk & milk products? I e.g.: powder, tinned, fresh Riels. 888 = Don't know V1 `self>99 || self == 0` M1 Must be 100 riels or higher or 0 if no spend.	NUMERIC: INTEGER L3
L4 - Edible oil? I e.g.: palm oil, groundnut oil, coconut oil Riels. 888 = Don't know V1 `self>99 || self == 0` M1 Must be 100 riels or higher or 0 if no spend.	NUMERIC: INTEGER L4
L5 - Vegetables and Fruits I Vegetables e.g.: okra, tomato, onion, carrot, cabbage, garden egg & fr uits e.g.: bananas, coconut, pineapple, mango, orange, pawpaw Riels. 8 88 = Don't know V1 `self>99 || self == 0` M1 Must be 100 riels or higher or 0 if no spend.	NUMERIC: INTEGER L5
L6 - Egg, fish, meat, & poultry? I Smoked/fresh fish. Riels. 888 = Don't know V1 `self>99 || self == 0` M1 Must be 100 riels or higher or 0 if no spend.	NUMERIC: INTEGER L6
L7 - Sugar? I Riels. 888 = Don't know V1 `self>99 || self == 0` M1 Must be 100 riels or higher or 0 if no spend.	NUMERIC: INTEGER L7
L8 - Condiments I e,g, pepper, salt, spices, butter, jam, bread, groundnut paste, processe d foods, etc. Include all processed foods not prepared by household us ing raw ingredients. Riels. 888 = Don't know V1 `self>99 || self == 0` M1 Must be 100 riels or higher or 0 if no spend.	NUMERIC: INTEGER L8
L9 - Meals/food bought outside home I -888=Don't know Include any meals purchased from outside that are n ot prepared by the household V1 `self>99 || self == 0 || self==-888` M1 must be 100 riels or higher or 0 if no spend	NUMERIC: INTEGER L9
L10 - Beverages (e.g.: malt drinks, minerals, coffee/Lipton/Milo)	NUMERIC: INTEGER L10

I -888=Don't know
V1 `self>99 || self == 0 || self==-888`
M1 must be 100 riels or higher or 0 if no spend

L11 - Alcohol, tobacco and cigarettes?

NUMERIC: INTEGER L11

I Riels. 888 = Don't know
V1 `self>99 || self == 0`
M1 Must be 100 riels or higher or 0 if no spend.

SECTION L - CONSUMPTION / EXPENDITURE

EXPENDITURES

STATIC TEXT

In the last 30 days, how much did you spend on...

L12 - Medical or pharmacy expenses?

NUMERIC: INTEGER L12

I e.g.: tablets/syrups, insecticide, condoms, pharmacy/chemist, tradition al/herbal medicine Riels. 888 = Don't know
V1 `self>99 || self == 0`
M1 Must be 100 riels or higher or 0 if no spend.

L13 - Soaps, disinfectants and cleaning supplies; cosmetics and toiletries?

NUMERIC: INTEGER L13

I Riels. 888 = Don't know
V1 `self>99 || self == 0`
M1 Must be 100 riels or higher or 0 if no spend.

L14 - Water supply for drinking and other uses?

NUMERIC: INTEGER L14

I e.g. tanker services, pipe-borne, metered, bore-hole, well, purchased water Riels. 888 = Don't know
V1 `self>99 || self == 0`
M1 Must be 100 riels or higher or 0 if no spend.

L15 - Mobile phone top-up?

NUMERIC: INTEGER L15

I Riels. 888 = Don't know
V1 `self>99 || self == 0`
M1 Must be 100 riels or higher or 0 if no spend.

L16 - Internet, land phone, dish, cable, and other household communication?

NUMERIC: INTEGER L16

I Riels. 888 = Don't know
V1 `self>99 || self == 0`
M1 Must be 100 riels or higher or 0 if no spend.

L17 - House Rent?

NUMERIC: INTEGER L17

I Riels. 888 = Don't know
E `B8==2`
V1 `self>99 || self == 0`
M1 Must be 100 riels or higher or 0 if no spend.

L18 - Transportation costs?

NUMERIC: INTEGER L18

I e.g fuel for own vehicles, cost of public transportation, buses, taxis Riel s. 888 = Don't know
V1 `self>99 || self == 0`
M1 Must be 100 riels or higher or 0 if no spend.

L19 - Other recurring monthly expenditure?

NUMERIC: INTEGER L19

I e.g. wage of domestic workers, entertainment, etc. Riels. 888 = Don't k

now

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

SECTION L - CONSUMPTION / EXPENDITURE

GOOD AND SERVICES EXPENDITURES

STATIC TEXT

In the last 12 months, how much did you spend on...

L20 - School fees and other educational expenses?

NUMERIC: INTEGER L20

I Include uniform, PTA dues, books, tutor, school supplies, transport, food, etc. Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L21 - Clothing, shoes, and accessories?

NUMERIC: INTEGER L21

I Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L22 - Celebrations?

NUMERIC: INTEGER L22

I Only include costs to host celebration or to give donations/gifts for attending celebrations, e.g. funerals and expenses, weddings, festivals, naming ceremony, engagement. Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L23 - Gifts and donations?

NUMERIC: INTEGER L23

I Only include gifts and donations not already included in L22, e.g.: donation to church made by the household, tithes. Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L24 - Hospital or Doctor visits and Diagnostic tests?

NUMERIC: INTEGER L24

I Do not include costs paid for by insurance, e.g.: consultations at private hospital, public hospital, traditional healer. Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L25 - Furniture?

NUMERIC: INTEGER L25

I e.g.: mattresses, room furniture, furnishing items, floor mats, carpets. Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L26 - Repair, maintenance, and building?

NUMERIC: INTEGER L26

I e.g.: cement, roofing, paint, carpentry, labor for repairs, sewerage removal Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L27 - Utensils & kitchen equipment?

NUMERIC: INTEGER L27

I e.g.: cups, plates, cutleries, cooking pots, buckets Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L28 - Electronics?

NUMERIC: INTEGER L28

I TV, radio-cassette player, VCR/DVD, Cassettes, CDs, records, satellite TV, MP3 player, video game player, pen drives, other digital accessories, Computer or laptop purchase Riels. 888 = Don't know

E `C2==1 || C75==1 || C104==1 || C122==1 || C160==6 || C160==10`

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L29 - Electric appliances & tools?

NUMERIC: INTEGER L29

I e.g.: electric iron, electric fans, refrigerators, lanterns Riels. 888 = Don't know

E `C2==1 || C75==1 || C104==1 || C122==1 || C160==6 || C160==10`

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L30 - Vehicles & motorcycle & bicycle?

NUMERIC: INTEGER L30

I Purchase or repair of own car/moto/ car battery Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L31 - Remittance sent to family members and relatives?

NUMERIC: INTEGER L31

I Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L32 - Losses due to theft, robbery, accidents, natural disasters, etc.?

NUMERIC: INTEGER L32

I Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L33 - Other major expenses not yet covered?

NUMERIC: INTEGER L33

I Riels. 888 = Don't know

V1 `self>99 || self == 0`

M1 Must be 100 riels or higher or 0 if no spend.

L33_other - Other (Specify).

TEXT L33_other

E `L33>0`

SECTION M - HOUSEHOLD ASSETS: TRANSPORTATION AND AGRICULTURAL EQUIPMENT OWNERSHIP AND TOTAL

STATIC TEXT

Interviewer Instructions: The Respondent should be the head of household

M0a - How many tuktuk in working condition does your household own?

NUMERIC: INTEGER M0a

I 0 = None

V1 `self >= 0`

M1 Must be higher or equal to 0.

M0b - What is the source of energy used for your tuktuk?

SINGLE-SELECT M0b

001 ○ National grid

002 ○ Local mini-grid

E M0a>0

003 ○ Generator
004 ○ Solar
005 ○ Rechargeable battery
006 ○ Dry cell battery
007 ○ Diesel
008 ○ LPG
009 ○ Kerosene
011 ○ Gasoline
012 ○ Biogas
013 ○ Manual
555 ○ Other, specify

M0b_other - Other (Specify).

TEXT M0b_other

E M0b==555

M1a - How many cars in working condition does your household own?

NUMERIC: INTEGER M1a

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

M1b - What is the source of energy used for your car?

SINGLE-SELECT M1b

E M1a>0

001 ○ National grid
002 ○ Local mini-grid
003 ○ Generator
004 ○ Solar
005 ○ Rechargeable battery
006 ○ Dry cell battery
007 ○ Diesel
008 ○ LPG
009 ○ Kerosene
011 ○ Gasoline
012 ○ Biogas
013 ○ Manual
555 ○ Other, specify

M1b_other - Other (Specify).

TEXT M1b_other

E M1b==555

M2a - How many motorcycles in working condition does your household own?

NUMERIC: INTEGER M2a

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

M2b - What is the source of energy used for your motorcycle?

SINGLE-SELECT M2b

E M2a>0

001 ○ National grid
002 ○ Local mini-grid
003 ○ Generator
004 ○ Solar
005 ○ Rechargeable battery
006 ○ Dry cell battery
007 ○ Diesel
008 ○ LPG
009 ○ Kerosene
011 ○ Gasoline
012 ○ Biogas
013 ○ Manual
555 ○ Other, specify

M2b_other - Other (Specify).

TEXT M2b_other

E M2b==555

M3 - How many bicycles in working condition does your household own?

NUMERIC: INTEGER M3

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

M4a - How many boats in working condition does your household own?

NUMERIC: INTEGER M4a

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

M4b - What is the source of energy used for your boat?

E M4a>0

SINGLE-SELECT M4b

001 ○ National grid
002 ○ Local mini-grid
003 ○ Generator
004 ○ Solar
005 ○ Rechargeable battery
006 ○ Dry cell battery
007 ○ Diesel
008 ○ LPG
009 ○ Kerosene
011 ○ Gasoline
012 ○ Biogas
013 ○ Manual
555 ○ Other, specify

M4b_other - Other (Specify).

TEXT M4b other

E M4b==555

M5a - How many tractors in working condition does your household own?

NUMERIC: INTEGER M5a

I Include koyun. 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

M5b - What is the source of energy used for your tractor?

E M5a>0

SINGLE-SELECT M5b

001 ○ National grid
002 ○ Local mini-grid
003 ○ Generator
004 ○ Solar
005 ○ Rechargeable battery
006 ○ Dry cell battery
007 ○ Diesel
008 ○ LPG
009 ○ Kerosene
011 ○ Gasoline
012 ○ Biogas
013 ○ Manual
555 ○ Other, specify

M5b_other - Other (Specify).

TEXT M5b_other

E M5b==555

M6a - How many domestic water pump in working condition does your household own?

NUMERIC: INTEGER M6a

I 0 = None
V1 self >= 0

M1 Must be higher or equal to 0.

M6b - What is the source of energy used for your domestic water pump?

E M6a>0

SINGLE-SELECT M6b

001 ○ National grid
002 ○ Local mini-grid
003 ○ Generator
004 ○ Solar
005 ○ Rechargeable battery
006 ○ Dry cell battery
007 ○ Diesel
008 ○ LPG
009 ○ Kerosene
011 ○ Gasoline
012 ○ Biogas
013 ○ Manual
555 ○ Other, specify

M6b_other - Other (Specify).

E M6b==555

TEXT M6b_other

M7 - How many cows, bulls, calves in healthy condition does your household own?

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER M7

M8 - How many water buffaloes in healthy condition does your household own?

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER M8

M9 - How many horses or donkeys in healthy condition does your household own?

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER M9

M10 - How many sheep, goats or pigs in healthy condition does your household own?

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER M10

M11 - How many rabbits in healthy condition does your household own?

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER M11

M12 - How many chicken, ducks or quails in healthy condition does your household own?

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER M12

M13 - Approximately how many fish in healthy condition does your household own?

I 0 = None
V1 self >= 0

NUMERIC: INTEGER M13

M1 Must be higher or equal to 0.

M14 - How many Incandescent Light Bulb in working condition does your household own?

NUMERIC: INTEGER M14

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C168==1 || C160==6 || C160==10
V1 self >= 0
M1 Must be higher or equal to 0.

M15 - How many Fluorescent Tube in working condition does your household own?

NUMERIC: INTEGER M15

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C168==1 || C160==6 || C160==10
V1 self >= 0
M1 Must be higher or equal to 0.

M16 - How many Compact Fluorescent Light (CFL) Bulb in working condition does your household own?

NUMERIC: INTEGER M16

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C168==1 || C160==6 || C160==10
V1 self >= 0
M1 Must be higher or equal to 0.

M17 - How many LED Light Bulb in working condition does your household own?

NUMERIC: INTEGER M17

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C168==1 || C160==6 || C160==10
V1 self >= 0
M1 Must be higher or equal to 0.

M18a - How many Radio/CD Players/sound system in working condition does your household own?

NUMERIC: INTEGER M18a

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C160==6 || C160==10
V1 self >= 0
M1 Must be higher or equal to 0.

M18b - How many hours does your household use radio, CD player or sound system in a typical day?

NUMERIC: INTEGER M18b

I Number of hours.
E M18a>0
V1 self>=0 && self<=24
M1 Must be comprised between 0 and 24.

M19 - How many VCD/DVD in working condition does your household own?

NUMERIC: INTEGER M19

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C160==6 || C160==10
V1 self >= 0
M1 Must be higher or equal to 0.

M20a - How many Fan in working condition does your household own?

NUMERIC: INTEGER M20a

I 0 = None

E C2==1 || C75==1 || C104==1 || C122==1 || C160==6 || C160 ==10
V1 self >= 0
M1 Must be higher or equal to 0.

M20b - How many hours does your household use the fan in a typical day?

NUMERIC: INTEGER M20b

I Number of hours.
E M20a>0
V1 self>=0 && self<=24
M1 Must be comprised between 0 and 24.

M21 - How many Refrigerator in working condition does your household own?

NUMERIC: INTEGER M21

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M22 - How many Microwave oven in working condition does your household own?

NUMERIC: INTEGER M22

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M23 - How many Electric Iron in working condition does your household own?

NUMERIC: INTEGER M23

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M24 - How many Washing machine in working condition does your household own?

NUMERIC: INTEGER M24

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M25 - How many Electric sewing machine in working condition does your household own?

NUMERIC: INTEGER M25

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M26 - How many Air cooler (External Unit) in working condition does your household own?

NUMERIC: INTEGER M26

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M27 - How many Electric water heater in working condition does your household own?

NUMERIC: INTEGER M27

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M26 - How many Solar based water heater in working condition does your household own?

NUMERIC: INTEGER M28

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

M29 - How many Computer in working condition does your household own?

NUMERIC: INTEGER M29

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M30 - How many Electric hot water pot/kettle in working condition does your household own?

NUMERIC: INTEGER M30

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

M31 - How many Smartphone (internet phone) charger in working condition does your household own?

NUMERIC: INTEGER M31

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

M32 - How many Regular mobile phone charger in working condition does your household own?

NUMERIC: INTEGER M32

I 0 = None
V1 self >= 0
M1 Must be higher or equal to 0.

M33a - How many Black & White TV in working condition does your household own?

NUMERIC: INTEGER M33a

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C160==6 || C160 ==10
V1 self >= 0
M1 Must be higher or equal to 0.

M33b - How many hours does your household use black and white TV in a typical day?

NUMERIC: INTEGER M33b

I Number of hours.
E M33a>0
V1 self>=0 && self<=24
M1 Must be comprised between 0 and 24.

M34a - How many Regular Color TV in working condition does your household own?

NUMERIC: INTEGER M34a

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C160==6 || C160 ==10
V1 self >= 0
M1 Must be higher or equal to 0.

M34b - How many hours does your household use the regular color TV in a typical day?

NUMERIC: INTEGER M34b

I Number of hours.

E M34a>0
V1 self>=0 && self<=24
M1 Must be comprised between 0 and 24.

M35a - How many Flat color TV in working condition does your household own?

NUMERIC: INTEGER M35a

I 0 = None
E C2==1 || C75==1 || C104==1 || C122==1 || C160==6 || C160==10
V1 self >= 0
M1 Must be higher or equal to 0.

M35b - How many hours does your household use the flat color TV in a typical day?

NUMERIC: INTEGER M35b

I Number of hours.
E M35a>0
V1 self>=0 && self<=24
M1 Must be comprised between 0 and 24.

M36 - How many Electric Water Pump in working condition does your household own?

NUMERIC: INTEGER M36

I 0 = None
E C2==1 || C75==1 || C122==1 || C160==6
V1 self >= 0
M1 Must be higher or equal to 0.

SECTION N - HOUSEHOLD LAND OWNERSHIP AND OTHER ASSETS

STATIC TEXT

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.

N1 - Do you own any of the following type of land or building?

MULTI-SELECT N1

I Multiple answers. Prompt. Non-agricultural land: e.g. forest land, empt y land, etc. Any building: e.g house, warehouse, shop, etc.
V1 self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4) && !self.Contains(111))
M1 Cannot select any other code with "None".

- 001 ☐ Farm land
- 002 ☐ Homestead land (where house stands)
- 003 ☐ Non-agricultural land (e.g. forest land, empty land, urban land, etc., but no buidling)
- 004 ☐ Building
- 111 ☐ None

SECTION N - HOUSEHOLD LAND OWNERSHIP AND OTHER ASSETS

Roster: ROSTERN

generated by multi-select question N1 ROSTERN

E IsAnswered(N1) && !N1.Contains(111)

N2 - What is the total size of the land?

NUMERIC: DECIMAL N2

E @rowcode<4

N2_unit - What is unit of land size given by the respondent?

SINGLE-SELECT N2 unit

E @rowcode < 4

- 001 ○ Hectare
- 002 ○ Square meters
- 003 ○ Are
- 555 ○ Other

N2_unit_other - Other (Specify).

TEXT N2 unit other

E N2_unit==555

N3 - If you were to sell this %ROSTERN%, what would be its total value?

I Riels. 888 = Don't know
V1 self==0 || self>=100
M1 Please enter a valid monetary value, higher or equal to 0.

NUMERIC: INTEGER N3

SECTION O - HOUSEHOLD ECONOMIC SHOCKS

STATIC TEXT

Only record information for events that negatively affected the economic situation of the household.

O1a - In the last 12 months, have you been affected by a loss of business or a farming failure, such as crop disease, livestock death, etc.?

SINGLE-SELECT O1a
00 ○ No
01 ○ Yes

O2a - Who was affected by the event?

I Prompt.
E O1a==1

SINGLE-SELECT O2a
01 ○ Just this household
02 ○ Family members outside this household
03 ○ Several households in this village
04 ○ Most or all households in this village
05 ○ Several villages in this area

O1b - In the last 12 months, have you been affected by a loss of employment due to imprisonment, illness or injury, or death of economically active household member?

SINGLE-SELECT O1b
00 ○ No
01 ○ Yes

O2b - Who was affected by the event?

I Prompt.
E O1b==1

SINGLE-SELECT O2b
01 ○ Just this household
02 ○ Family members outside this household
03 ○ Several households in this village
04 ○ Most or all households in this village
05 ○ Several villages in this area

SECTION P - STREET LIGHTING

STATIC TEXT

The respondent should be the most knowledgeable household member on household electricity.

P1 - Respondent ID

SINGLE-SELECT: LINKED P1

P2 - Does your neighborhood have any form of street lighting?

I "Neighbourhood" means around 500 m from household.

SINGLE-SELECT P2
00 ○ No
01 ○ Yes

P3 - How satisfied are you with the brightness

SINGLE-SELECT P3

of the street lighting service in your neighbourhood?

I Prompt.
E P2==1

01 ○ Very unsatisfied
02 ○ Somewhat unsatisfied
03 ○ Somewhat satisfied
04 ○ Very satisfied

P4 - What do you think are the risks or problems with street lighting in your neighbourhood?

I Multiple answers.
E P2==1
V1 self.ContainsOnly(111) || (self.ContainsAny(1,2,3,4,5) && !self.Contains(111))
M1 Cannot select "No risks / problems" with other options

MULTI-SELECT P4

001 ☐ Electrocution
002 ☐ Poor installation
003 ☐ Poor maintenance
004 ☐ Outages/blackouts of street lighting
005 ☐ Does not stay on all night
111 ☐ No risks/problems

P5 - Do you have a light that you could turn on at night to provide light outside your home?

SINGLE-SELECT P5

00 ○ No
01 ○ Yes

P6 - How many hours do you turn it on each night after it becomes dark?

I Hours.
E P5==1
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER P6

SECTION Q - TIME USE

SECTION Q - TIME USE
Roster: ROSTERQ
generated by fixed list

ROSTERQ

01 Women (Age 15 yrs and older)
02 Girls (5 to 15 yrs)
03 Men (Age 15 yrs and older)
04 Boys (5 to 15 yrs)

E (@rowcode==1 && $WOMAN) || (@rowcode==2 && $GIRL) || (@rowcode==3 && $MAN) || (@rowcode==4 && $BOY)

STATIC TEXT

In a typical day, in total how many minutes did %ROSTERQ% spend...

Q1 - Gathering, collecting or purchasing fuels including travel time?

I Minutes. 0 = No time spent on this activity 888 = Don't know
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER Q1

Q2 - Preparing fuel or energy source?

I Chopping, making pellets Minutes. 0 = No time spent on this activity 888 = Don't know
V1 self>=0
M1 Must be higher or equal to 0.

NUMERIC: INTEGER Q2

Q3 - Cooking?

I Food, tea, boiling water. Minutes. 0 = No time spent on this activity 888 = Don't know
V1 self>=0

NUMERIC: INTEGER Q3

M1 Must be higher or equal to 0.

Q4 - Doing other tasks in the cooking area?

NUMERIC: INTEGER Q4

I Minutes. 0 = No time spent on this activity 888 = Don't know
V1 self>=0
M1 Must be higher or equal to 0.

Q6 - Using stove for other purposes?

NUMERIC: INTEGER Q6

I Ex: brewing beer, preparing fodder for animals Minutes. 0 = No time s pent on this activity 888 = Don't know
V1 self>=0
M1 Must be higher or equal to 0.

Q8 - Caring, attending, or playing with younger children?

NUMERIC: INTEGER Q8

I Minutes. 0 = No time spent on this activity 888 = Don't know
V1 self>=0
M1 Must be higher or equal to 0.

Q9 - Studying or helping with school work?

NUMERIC: INTEGER Q9

I Minutes. 0 = No time spent on this activity 888 = Don't know
E $ATTEND
V1 self>=0
M1 Must be higher or equal to 0.

Q10 - Working for pay outside of the house?

NUMERIC: INTEGER Q10

I Employed and self-employed Minutes. 0 = No time spent on this activit y 888 = Don't know
V1 self>=0
M1 Must be higher or equal to 0.

Q11 - Income generating activities inside the house?

NUMERIC: INTEGER Q11

I Minutes. 0 = No time spent on this activity 888 = Don't know
V1 self>=0
M1 Must be higher or equal to 0.

Q12 - Time spent on entertainment and socializing?

NUMERIC: INTEGER Q12

I Minutes. 0 = No time spent on this activity 888 = Don't know
V1 self>=0
M1 Must be higher or equal to 0.

SECTION R - HEALTH IMPACTS

R0a - Was anybody in your household sick in the last 14 days?

SINGLE-SELECT R0a

00 ○ No
01 ○ Yes

R0b - How many people have been sick in the past 14 days?

NUMERIC: INTEGER R0b

E R0a==1
V1 self>0 && self<=TOTALMEMBERS
M1 Must be comprised between 1 and %TOTALMEMBERS%.

Roster: ROSTER OF SICK HOUSEHOLD MEMBERS

generated by numeric question R0b

ROSTERR

E R0a==1

R0c - Who was sick?

SINGLE-SELECT: LINKED R0c

R1 - Was %rostertitle% coughing in the past 14 days?

SINGLE-SELECT R1

00 ○ No
01 ○ Yes

R2 - Did %rostertitle% go and see a doctor?

SINGLE-SELECT R2

00 ○ No
01 ○ Yes

R3 - Was %rostertitle% breathing faster than usual with short, rapid breaths or had difficulty breathing?

SINGLE-SELECT R3

00 ○ No
01 ○ Yes

R4a - Did %rostertitle% experience a problem in the chest?

SINGLE-SELECT R4a

00 ○ No
01 ○ Yes

R4b - Did %rostertitle% experience a runny nose?

SINGLE-SELECT R4b

00 ○ No
01 ○ Yes

R5 - Did %rostertitle% experienced eye irritation or eye problems in the last 14 days?

SINGLE-SELECT R5

00 ○ No
01 ○ Yes

R6a - In the last 12 months, did anybody in your household suffer from poisoning because of the liquid cooking fuel?

E $LIQUID

SINGLE-SELECT R6a

00 ○ No
01 ○ Yes

R6b - Who?

I Multiple answers.
E R6a==1

MULTI-SELECT: LINKED R6b

R7a - In the last 12 months, did anybody in your household suffer from burns while cooking or manipulating cooking fuel?

SINGLE-SELECT R7a

00 ○ No
01 ○ Yes

R7b - Who?

I Multiple answers.
E R7a==1

MULTI-SELECT: LINKED R7b

VARIABLE

R7b.Count()

DOUBLE BURNS

R8 - How many of these people with burns required a visit to the clinic or hospital?

E R7a==1
V1 self>=0 && self<=BURNS
M1 Must be lower or equal to %BURNS%.

NUMERIC: INTEGER R8

R9a - In the last 12 months, did anybody in your household suffer from back or neck problems

SINGLE-SELECT R9a

00 ○ No

from carrying fuel for cooking?

E $NOBULK

01 ○ Yes

R9b - Who?

I Multiple answers.

E R9a==1

MULTI-SELECT: LINKED R9b

R10a - In the last 12 months, did anybody in your household suffer from electrical injuries that prevented them from going to work or to school?

E C2==1 || C75==1 || C104==1 || C122==1

SINGLE-SELECT R10a

00 ○ No
01 ○ Yes

R10b - Who?

I Multiple answers.

E R10a==1

MULTI-SELECT: LINKED R10b

R11a - In the last 12 months, did anybody in your household suffer from any other minor electrical injuries?

E C2==1 || C75==1 || C104==1 || C122==1

SINGLE-SELECT R11a

00 ○ No
01 ○ Yes

R11b - Who?

I Multiple answers.

E R11a==1

MULTI-SELECT: LINKED R11b

SECTION S - ATTITUDES

S2 - How has the price of electricity changed over time?

I Prompt (except for "Don't know" option).

E C2==1

SINGLE-SELECT S2

001 ○ It has gotten much higher
002 ○ Stayed about the same
003 ○ It has gotten cheaper
888 ○ Don't know

S3 - How has the frequency of power outage or voltage variation changed over time?

I Prompt (except for "Don't know" option).

E C2==1

SINGLE-SELECT S3

001 ○ It has gotten worse
002 ○ Stayed the same
003 ○ Better
888 ○ Don't know

S4 - How has the duration of electricity supply at night changed over time?

I Prompt (except for "Don't know" option).

E C2==1

SINGLE-SELECT S4

001 ○ It has gotten worse
002 ○ Stayed the same
003 ○ Better
888 ○ Don't know

S5 - Since you first received your electricity connection, how has the duration of electricity supply during the day changed?

I Prompt (except for "Don't know" option).

E C2==1

SINGLE-SELECT S5

001 ○ It has gotten worse
002 ○ Stayed the same
003 ○ Better
888 ○ Don't know

S6 - If you could use electricity from the grid to power an appliance that you do not currently own, what would it be?

I Up to 3 answers possible.

MULTI-SELECT S6

001 ☐ Fan
002 ☐ Radio
003 ☐ Television

E C2==1

004 ☐ Refrigerator
005 ☐ Electronic Tablet
006 ☐ Computer
007 ☐ Hair clippers
008 ☐ Power Tools
009 ☐ Phone with internet (smartphone)
555 ☐ Other

S6_other - Other (Specify).

E S6.Contains(555)

TEXT S6_other

.....

S7 - Why do you not yet own one of these appliances?

I Multiple answers.
E C2==1

MULTI-SELECT S7

001 ☐ Too expensive
002 ☐ No products available
003 ☐ Products require too much energy, cannot power them with my system
555 ☐ Other

S7_other - Other (Specify).

E S7.Contains(555)

TEXT S7_other

.....

S8 - How satisfied are you with the service from %C160%?

I Prompt.
E C2==1

SINGLE-SELECT S8

01 ○ Very satisfied
02 ○ Somewhat satisfied
03 ○ Neutral
04 ○ Unsatisfied
05 ○ Very unsatisfied

STATIC TEXT

Read the following statement and ask respondent whether he or she agrees (Yes), disagrees (No), or has no opinion.

SECTION S - ATTITUDES

ELECTRICITY

S9 - With electrical light the children can study more at night.

SINGLE-SELECT S9

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

S10 - I know well about energy efficiency technology which can save electricity consumption.

SINGLE-SELECT S10

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

S11 - I am well aware of energy efficiency appliances.

SINGLE-SELECT S11

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

S12 - I would like to purchase energy efficient appliances.

SINGLE-SELECT S12

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

S13 - A solar based system is a good source of electricity.

SINGLE-SELECT S13

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

S16 - The monthly electric bill is or would be a financial burden for my family.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S16
S22 - Electricity can benefit communities through economic and enterprise development.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S22

SECTION S - ATTITUDES

COOKING

S31 - Electricity is expensive for cooking.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S31
S33 - LPG is expensive for cooking household meals.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S33
S34 - Certain food tastes better when cooked with biomass compared to gas or electricity.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S34
S37 - Collecting and preparing firewood is a burden for my family.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S37

SECTION S - ATTITUDES

STREET LIGHTING

S38 - Street lighting makes it safer for women and girls to be outside at night.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S38
S39 - Street lighting makes it safer for children to be outside at night.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S39
S40 - Street lighting leads to fewer crimes.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S40
S41 - Street lighting lets more people move around at night.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S41
S42 - Street lighting allows for more community activities to occur at night.	SINGLE-SELECT 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion	S42

S43 - Street lighting lets night markets and other businesses stay open.

SINGLE-SELECT S43

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

SECTION S - ATTITUDES
PAYMENT AND FINANCE

S44 - I prefer to pay with mobile money than with vouchers, tokens, or pre-paid cards.

SINGLE-SELECT S44

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

S46 - I would rather pay a very small amount to rent a solar system than pay a very large amount once to own it.

SINGLE-SELECT S46

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

S47 - I would rather pay per unit of electricity (kWh) instead of renting or buying a solar system.

SINGLE-SELECT S47

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

SECTION S - ATTITUDES
DECISION MAKING

S53 - Men usually make decisions on the distribution of family budget.

SINGLE-SELECT S53

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

S54 - Men usually make decisions on purchasing of energy and energy-consuming devices.

SINGLE-SELECT S54

01 ○ Agrees
02 ○ Disagrees
03 ○ No Opinion

SECTION T - WOMEN'S EMPOWERMENT

STATIC TEXT

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

T0 - Is the female head of household available?

SINGLE-SELECT T0

00 ○ No
01 ○ Yes

T1 - Can you visit your parents, relatives or friends alone, or do you need your husband, or other people to go with you?

E T0==1

SINGLE-SELECT T1

01 ○ Can go by herself
02 ○ Can go with husband
03 ○ Can go with others

T1_other - Other (Specify).

E T1==3

TEXT T1 other

.....

T2 - Can you go to market, bank, commercial center or work place alone, or do you need your husband, or other people to go with you?

SINGLE-SELECT T2

01 ○ Can go by herself
02 ○ Can go with husband

E T0==1

03 ○ Can go with others

T2_other - Other (Specify).

E T2==3

TEXT T2 other

.....

T3 - Can you go outside the village alone, or do you need your husband, or other people to go with you?

E T0==1

SINGLE-SELECT T3

01 ○ Can go by herself
02 ○ Can go with husband
03 ○ Can go with others

T3_other - Other (Specify).

E T3==3

TEXT T3 other

.....

STATIC TEXT

E T0==1

ACCESS TO INFORMATION, ORGANIZATION MEMBERSHIP, VILLAGE ELECTRIFICATION COMMITTEE, CAPACITY BUILDING AND ACCESS TO FINANCE

T4a - Are you member of a women's group?

E T0==1

SINGLE-SELECT T4a

00 ○ No
01 ○ Yes

T4 - If you are a member of a women's group, which type of group are you a member of/do you belong to?

E T4a==1

MULTI-SELECT T4

002 ☐ Religious related activities
003 ☐ Health care related activities
004 ☐ Income generating activities
005 ☐ Self help organization
006 ☐ Savings group
007 ☐ Microfinance organization
008 ☐ Cooperative
009 ☐ Village administrative committee
010 ☐ Village electrification committee
555 ☐ Other

T4_other - Other (Specify).

E T4.Contains(555)

TEXT T4_other

.....

T5a - Is there any constraint that women would face when participating in organisations or activities in the area?

E T0==1

SINGLE-SELECT T5a

00 ○ No
01 ○ Yes

T5 - Which constraints?

E T5a==1

MULTI-SELECT T5

001 ☐ Limited time
002 ☐ Lack of support from family
003 ☐ Limited confidence
004 ☐ Limited education
555 ☐ Other

T5_other - Other (Specify).

E T5.Contains(555)

TEXT T5 other

.....

T8 - Do you own a bank account?

I Read options aloud

E T0==1

SINGLE-SELECT T8

01 ○ No account
02 ○ Own account
03 ○ Joint account (with spouse)
04 ○ Joint account (with group)

SECTION U - CONTACT DETAILS

U1 - Could you please give me your cellphone number, so that we can contact you again if we need to follow up with you?

E CONSENT==1

SINGLE-SELECT U1

00 ○ No
01 ○ Yes

U2 - Record Phone number

E U1==1

NUMERIC: INTEGER U2

U3 - Do you have a second phone number?

E IsAnswered(U2)

SINGLE-SELECT U3

00 ○ No
01 ○ Yes

U4 - Record Phone number

E U3==1

NUMERIC: INTEGER U4

U5 - Thank you very much for your time today. We might need to contact you again in the future to confirm your answers or find out some more details. Would it be ok if we contact you on one of these phone numbers?

E U1==1

SINGLE-SELECT U5

00 ○ No
01 ○ Yes

INTSTOP - Press here when you complete the interview

DATE: CURRENT TIME INTSTOP

GPS - Press here to record GPS

GPS GPS

N

W

A

If tablet GPS is not working please enter x co-ordinate from yellow handheld device.

I ENTER LIKE XX.XXXXX

TEXT GPSLAT

If tablet GPS is not working please enter y co-ordinate from yellow handheld device.

I ENTER LIKE XXX.XXXXX

TEXT GPSLONG

INTCOMMENTS - Enumerators comments.

I Type "none" if no comment.

TEXT INTCOMMENTS

RESULT

SINGLE-SELECT RESULT

01 ○ Completed
02 ○ Incomplete-respondent termination
03 ○ Incomplete-third party interruption
04 ○ Respondent refusal
05 ○ Parent/ administrator/ husband refusal

06 ○ Respondent absent at 2nd appointment

07 ○ Cannot interview respondent. e.g. mute/deaf/mental health etc

APPENDIX A — OPTIONS

[1] PROVINCE: Province

Options: 1:Banteay Meanchey, 2:Battambang, 3:Kampong Cham, 4:Kampong Chhnang, 5:Kampong Speu, 6:Kampong Thom, 7:Kampot, 8:Kandal, 9:Kep, 10:Koh Kong, 11:Kracheh, 12:Mondul Kiri, 13:Otdar Meanchey, 14:Pailin, 15:Phnom Penh, 16:Preah Sihanouk, 17:Preah Vihear, 18:Prey Veng, 19:Pursat, 20:Ratanak Kiri, 21:Siem Reap, 22:Stung Treng, 23:Svay Rieng, 24:Takeo, 25:Tboung Khmum,

[2] DISTRICT: District

Options: 1:Malai, 2:Mongkol Borei, 3:Ou Chrov, 4:Paoy Paet, 5:Phnum Srok, 6:Serei Saophoan, 7:Svay Chek, 8:Thma Puok, 9:Banan, 10:Battambang, 11:Bavel, 12:Koas Krala, 13:Moung Ruessei, 14:Phnum Proek, 15:Rotonak Mondol, 16:Sampov Lun, 17:Sangkae, 18:Thma Koul, 19:Batheay, 20:Chamkar Leu, 21:Cheung Prey, 22:Kampong Cham, 23:Kampong Siem, 24:Kang Meas, 25:Prey Chhor, 26:Srei Santhor, 27:Stueng Trang, 28:Baribour, 29:Chol Kiri, 30:Kampong Chhnang, 31:Kampong Tralach, 32:Sameakki Mean Chey, 33:Basedth, 34:Chbar Mon, 35:Kong Pisei, 36:Odongk, 37:Phnum Sruoch, 38:Samraong Tong, 39:Baray, 40:Kampong Svay, 41:Prasat Ballangk, 42:Sandan, 43:Santuk, 44:Stoung, 45:Stueng Saen, 46:Angkor Chey, 47:Banteay Meas, 48:Chhuk, 49:Chum Kiri, 50:Kampong Trach, 51:Kampot, 52:Tuek Chhou, 53:Angk Snuol, 54:Kandal Stueng, 55:Kaoh Thum, 56:Khsach Kandal, 57:Kien Svay, 58:Lvea Aem, 59:Ponhea Lueu, 60:S'ang, 61:Ta Khmau, 62:Damnak Chang'aeur, 63:Kaeb, 64:Srae Ambel, 65:Chetr Borei, 66:Chhloung, 67:Kracheh, 68:Sambour, 69:Pech Chreada, 70:Banteay Ampil, 71:Samraong, 72:Pailin, 73:Sala Krau, 74:Chamkar Mon, 75:Chbar Ampov, 76:Chraoy Chongvar, 77:Dangkao, 78:Doun Penh, 79:Mean Chey, 80:Prampir Meakkakra, 81:Pur SenChey, 82:Russey Keo, 83:Saensokh, 84:Tuol Kouk, 85:Preah Sihanouk, 86:Prey Nob, 87:Choam Ksant, 88:Kuleaen, 89:Preah Vihear, 90:Rovieng, 91:Ba Phnum, 92:Kamchay Mear, 93:Kampong Trabaek, 94:Kanhchriech, 95:Me Sang, 96:Pea Reang, 97:Peam Chor, 98:Peam Ro, 99:Preah Sdach, 100:Pur Rieng, 101:Sithor Kandal, 102:Svay Antor, 103:Bakan, 104:Krakor, 105:Phnum Kravanh, 106:Pursat, 107:Lumphat, 108:Ou Ya Dav, 109:Veun Sai, 110:Banteay Srei, 111:Chi Kraeng, 112:Kralanh, 113:Prasat Bakong, 114:Puok, 115:Siem Reap, 116:Soutr Nikom, 117:Svay Leu, 118:Siem Bouk, 119:Siem Pang, 120:Stueng Traeng, 121:Kampong Rou, 122:Romeas Haek, 123:Rumduol, 124:Svay Chrum, 125:Svay Rieng, 126:Svay Teab, 127:Angkor Borei, 128:Bati, 129:Doun Kaev, 130:Kaoh Andaet, 131:Kiri Vong, 132:Prey Kabbas, 133:Samraong, 134:Tram Kak, 135:Treang, 136:Dambae, 137:Krouch Chhmar, 138:Memot, 139:Ponhea Kraek, 140:Suong, 141:Tboung Khmum,

[3] COMMUNE: Commune

Options: 1:Ta Kong, 2:Kouk Ballangk, 3:Ruessei Kraok, 4:Changha, 5:Paoy Paet, 6:Phsar Kandal, 7:Ponley, 8:Srah Chik, 9:Ou Ambel, 10:Preah Ponlea, 11:Phkoam, 12:Phum Thmei, 13:Ta Kream, 14:Chamkar Samraong, 15:Kdol Doun Teav, 16:Preaek Preah Sdach, 17:Rotanak, 18:Svay Pao, 19:Ampil Pram Daeum, 20:Boeung Pram, 21:Doun Ba, 22:Kear, 23:Bour, 24:Phlov Meas, 25:Serei Mean Chey, 26:Ou Dambang Pir, 27:Bansay Traeng, 28:Sandaek, 29:Svay Teab, 30:Ta Ong, 31:Sramar, 32:Boeng Kok, 33:Veal Vong, 34:Trean, 35:Sour Kong, 36:Chrey Vien, 37:Baray, 38:Dang Kdar, 39:Tuol Sambuor, 40:Phsar, 41:Peam Chhkaok, 42:Kampong Chhnang, 43:Khsam, 44:Phsar Chhnang, 45:Ta Ches, 46:Peam, 47:Tbaeng Khpos, 48:Pou Angkrang, 49:Rokar Thum, 50:Prey Nheat, 51:Preah Srae, 52:Prey Krasang, 53:Veang Chas, 54:Tang Samraong, 55:Thummoda Ar, 56:Trapeang Kong, 57:Chaeung Daeung, 58:Triel, 59:Chey, 60:Sakream, 61:Sala Visai, 62:Sochet, 63:Prasat, 64:Popok, 65:Achar Leak, 66:Champei, 67:Sdach Kong Khang Cheung, 68:Krang Snay, 69:Trapeang Reang, 70:Ang Sophy, 71:Andoung Khmer, 72:Stueng Kaev, 73:Trapeang Thum, 74:Baek Chan, 75:Krang Mkak, 76:Trapeang Veaeng, 77:Chheu Kmau, 78:Chrouy Ta Kaev, 79:Sampov Pun, 80:Preaek Ampil, 81:Kokir, 82:Preaek Ruessei, 83:Kaoh Chen, 84:Phsar Daek, 85:Roka Khpos, 86:Daeum Mien, 87:Kampong Samnanh, 88:Pong Tuek, 89:Kaeb, 90:Srae Ambel, 91:Bos Leav, 92:Sambok, 93:Kampong Damrei, 94:Preaek Saman, 95:Kracheh, 96:Voadthonak, 97:Bu Sra, 98:Kouk Khpos, 99:Koun Kriel, 100:Samraong, 101:Pailin, 102:Ou Andoung, 103:Boeng Keng Kang Ti Bei, 104:Boeng Keng Kang Ti Muoy, 105:Tonle Basak, 106:Tuol Svay Prey Ti Pir, 107:Tuol Tumpung Ti Muoy, 108:Chhbar Ampov Ti Muoy, 109:Chhbar Ampov Ti Pir, 110:Kbal Kaoh, 111:Nirouth, 112:Preaek Aeng, 113:Preaek Pra, 114:Veal Sbov, 115:Chrouy Changvar, 116:Kaoh Dach, 117:Preaek Ta Sek, 118:Dangkao, 119:Phsar Chas, 120:Phsar Kandal Ti Muoy, 121:Phsar Thmei Ti Muoy, 122:Voat Phnum, 123:Boeng Tumpun, 124:Chak Angrae Kraom, 125:Chak Angrae Leu, 126:Stueng Mean chey, 127:Ou Ruessei Ti Buon, 128:Veal Vong, 129:Chaom Chau, 130:Kakab, 131:Kamboul, 132:Trapeang Krasang, 133:Chrang Chamreh Ti Muoy, 134:Kilomaetr Lekh Prammuoy, 135:Ruessei Kaev, 136:Tuol Sangkae, 137:Khmuonh, 138:Phnom Penh Thmei, 139:Tuek Thla, 140:Boeng Kak Ti Muoy, 141:Boeng Salang, 142:Phsar Daeum Kor, 143:Phsar Depou Ti Muoy, 144:Tuek L'ak Ti Bei, 145:Tuek L'ak Ti Muoy, 146:Buon, 147:Muoy, 148:Pir, 149:Prey Nob, 150:Choam Ksant, 151:Kuleaen Cheung, 152:Kampong Pranak, 153:Reaksa, 154:Sdau Kaong, 155:Kranhung, 156:Ansaong, 157:Prey Chhor, 158:Chong Ampil, 159:Prey Khnes, 160:Prey Sralet, 161:Ruessei Srok, 162:Peam Mean Chey, 163:Preaek Khsay Kha, 164:Kampong Soeng, 165:Preaek Anteah, 166:Chrey Khmum, 167:Angkor Tret, 168:Boeng Khnar, 169:Trapeang chorng, 170:Kampong Pou, 171:Phteah Rung, 172:Chamraeun Phal, 173:Phteah Prey, 174:Chey Otdam, 175:Saom Thum, 176:Phnum Kok, 177:Tbaeng, 178:Kouk Thlok Kraom, 179:Chanleas Dai, 180:Roung Kou, 181:Ballangk, 182:Trapeang Thum, 183:Lvea, 184:Kouk Chak, 185:Siem Reab, 186:Sla Kram, 187:Svay Dankum, 188:Kien Sangkae, 189:Kantuot, 190:Srae Krasang, 191:Sekong, 192:Stueng Traeng, 193:Prey Thum, 194:Tnaot, 195:Mream, 196:Svay Chek, 197:Chambak, 198:Kruos, 199:Chek, 200:Monourom, 201:Preaek Phtoul, 202:Pot Sar, 203:Roka Knong, 204:Prey Khla, 205:Kampeaeng, 206:Prey Phdau, 207:Khvav, 208:Samraong, 209:Leay Bour, 210:Angk Khnor, 211:Chong Cheach, 212:Seda, 213:Roka Khnor, 214:Rumchek, 215:Kak, 216:Kaong Kang, 217:Suong, 218:Anhchaeum, 219:Chob, 220:Roka Po Pram,

[4] VILLAGE: Village

Options: 1:Ta Kong, 2:Char Thmei, 3:Chumteav, 4:Ta Chrueng, 5:Baliley 2, 6:Chan Kiri, 7:Kbal Spean 1, 8:Kbal Spean 2, 9:Ou Chrov, 10:Poay Pet, 11:Phsar Kandal, 12:Prachea Thorm Kaeut, 13:Ponley, 14:Srah Chik, 15:Roung Masin, 16:Preah Ponlea, 17:Yeang, 18:Thmei Lech, 19:Ta Ngaen, 20:Chamkar Samraong Muoy, 21:Kantuot, 22:Ta Pruoch, 23:Preaek Ta Tan, 24:Souphi Pir, 25:Mphey Osakphea, 26:Siem, 27:Boeung Thung, 28:Prey Phnheas, 29:Kear Bei, 30:Ouda, 31:Sek Sak, 32:Kumnor Beng, 33:Dambouk Khpos, 34:Ta Kay, 35:Kampal, 36:Tang Krang, 37:Chamraeun Phal, 38:Andoung Treang, 39:Chrouy Thma, 40:Phum Pir, 41:Paen, 42:Boeng Sang Kaeut, 43:Banteay Rueng, 44:Tuol Bak Koam, 45:Kamphlak, 46:Ou Pir, 47:Tuol Sambuor, 48:Phsar, 49:Anlong Metrei, 50:La Tuek Trei, 51:Ti Muoy, 52:Chong Kaoh, 53:Banteay Meas, 54:Voat Thmei, 55:Chanva riel, 56:Roleang, 57:Kandaol, 58:Prey Sroul, 59:Snao Ti Muoy, 60:Prey Rongieng, 61:Pou Kaong, 62:Trapeang Chrov, 63:Vihear Khpos, 64:Krang thum, 65:Dei Kraham, 66:Srae Ambel, 67:Ta Aong, 68:Kiri Andaet, 69:Prey Tob, 70:Kien Teak, 71:Ruessei Duoch, 72:Pou Roung, 73:Banteay Yumreach, 74:Sambuor, 75:Krachab, 76:Tonle Neam, 77:Kanlang, 78:Touch, 79:Trapeang Veaeng, 80:Boeng Thum Khang Kaeut, 81:Tvi Khang tboung, 82:Anlong Meakprang, 83:Trapeang Chrey, 84:Trach Toul, 85:Angk Popeay, 86:Trapeang Barku, 87:Tuol Svay, 88:Lekh Buon, 89:Preaek Sueng, 90:Preaek Krabau muoy, 91:Chanlak Kraw, 92:Peam Sdei, 93:Ta Pov, 94:Thommeak Treiy, 95:Kaoh Kor, 96:Preaek Ta Pov, 97:Krabaou, 98:Ou Doung, 99:Kaeb, 100:Srae Ambel, 101:Bos Leav Kraom, 102:Boeng Run, 103:Veal Kansaeng, 104:Chheu Teal Phluoh, 105:Voat, 106:Vodthonak, 107:Pu Til, 108:Chheu Slab, 109:Khtum, 110:Phniet, 111:Pul, 112:Pa Hi Choeng, 113:O Andoang, 114:Phum8, 115:Phum2, 116:Phum14, 117:Phum8, 118:Phum4, 119:Daeum Meakkloea, 120:Daeum Chan1, 121:Daeum Slaeng1, 122:Kandal1, 123:Chrouy Ampil 1, 124:Chrouy Ampil 2, 125:Preaek Thum 1, 126:Preaek Thum 2, 127:Ruessei Sros, 128:Ta Ngov Kandal, 129:Ta Ngov Krom, 130:Chong Preaek 1, 131:Ta Prum, 132:Chrouy Basak1, 133:Ou Andoung1, 134:Preaek Cheang Prum, 135:Phum Ti Pir, 136:Lvea, 137:Preaek Ta Roatn, 138:Khva, 139:Phum6, 140:Phum13, 141:Phum4, 142:Phum3, 143:Chamraeun Phal, 144:Chamraeun Phal1, 145:Kbal Tumnob1, 146:Sansam Kosal 3, 147:Sansam Kosal 4, 148:Tnaot Chrum1, 149:Tnaot Chrum2, 150:Tnaot Chrum3, 151:Tnaot Chrum4, 152:Preaek Ta Long1, 153:Preaek Ta Long2, 154:Tuol Roka1, 155:Tuol Roka2, 156:Preaek Ta Kong2, 157:Preaek Ta Kong3, 158:Preaek Ta Nu, 159:Preaek Ta Nu1, 160:Damnak Thum1, 161:Damnak Thum3, 162:Ruessei1, 163:Trea, 164:Trea1, 165:Trea2, 166:Trea3, 167:Trea4, 168:Phum1, 169:Phum2, 170:Chrey Kaong, 171:Thma Koul, 172:Trapeang Thloeng, 173:Chamkar Ovloek, 174:Ta Ke, 175:Samaki4, 176:Phum 1, 177:Kraol Kou, 178:Mittakpheap, 179:Tuol Kouk, 180:Tuol Sangkae, 181:Trapeagragthmei, 182:Damnak, 183:Tumnob, 184:Se Pe Se, 185:Trapeang Chhuk, 186:Phum11, 187:Phum8, 188:Phum2, 189:Phum2, 190:Phum7, 191:Phum7, 192:Mondol Muoy, 193:Mondol Pir, 194:Mondol Bei, 195:Prey Nob Bei, 196:Chheu Teal Kong, 197:Kuleaeng Cheung, 198:Samraong, 199:Sanlung Chey, 200:Prey Phdau, 201:Angkrong Ti Pir, 202:Ansaong, 203:A Kreach, 204:Prey Svay, 205:Ruessei Chak, 206:Krang, 207:Ta Pung, 208:Boeng K'aek, 209:Phum Buon, 210:Kandal, 211:Ta Mao, 212:Chrey Khmum, 213:Sraloung Pir, 214:Sakar, 215:Kaoh Kaev, 216:Pou Robang, 217:Chreykrem, 218:Ou Tong, 219:Peal Nheaek Pir, 220:Srae Chhuk, 221:Saom Klueng, 222:Phnum Kok Lav, 223:Srah Khvav, 224:Thnal Ta Set, 225:Kambaor, 22

6:Lbaeuk Prei, 227:Sna TeChour 317, 228:Lvea, 229:Chreas, 230:Kouk Beng, 231:Nokor Krau, 232:Teaksen Tboung, 233:Trapeang Seh, 234:Pou, 235:Dak Pou, 236:Thmei, 237:Thnal Chaek, 238:Khnar Krau, 239:Srae Krasang, 240:Ban huoy, 241:Phomrachea Nukol, 242:Prey Sakum, 243:Kandal, 244:Boeng Phe, 245:Popul, 246:Ampov Prey, 247:Lvea, 248:Thmol, 249:Monourom, 250:Angkor, 251:Kleang Sambatt, 252:Chak, 253:Kaev Kamphleung, 254:Ta Pov, 255:Dong, 256:Tram Kol, 257:Svay, 258:Thnong Roleung, 259:Prey Meas, 260:Ponleak, 261:Chi Theang, 262:Phum Ti Pir, 263:Khpob, 264:Sambour, 265:Kandaol Kaong, 266:Cheung Lang, 267:Phum Bei Roy Dob, 268:Ta Trav, 269:Tuol Trea Cheung, 270:Pong Tuek,

[5] A9: A9 - What is the highest grade of education %rostertitle% has completed?

Options: 0:Pre-school or no education, 1:Grade 1, 2:Grade 2, 3:Grade 3, 4:Grade 4, 5:Grade 5, 6:Grade 6, 7:Grade 7, 8:Grade 8, 9:Grade 9, 10:Grade 10, 11:Grade 11, 12:Grade 12, 13:Some university, 14:Bachelors or Associates, 15:Masters or Doctorates, 555:Other,

[6] A15: A15 - Please describe the kind of trade or business %rostertitle%'s main occupation best fits from the list of industries.

Options: 1:Agriculture, forestry or fishing, 2:Mining and quarrying, 3:Manufacturing, 4:Electricity, gas, steam and air conditioning supply, 5:Water supply; sewerage, waste management and remediation activities, 6:Construction, 7:Wholesale and retail trade; repair of motor vehicles and motorcycles, 8:Transportation and storage, 9:Accommodation and food service activities, 10:Information and communication, 11:Financial and insurance activities, 12:Real estate activities, 13:Professional, scientific and technical activities, 14:Administrative and support service activities, 15:Public administration and defense; compulsory social security, 16:Education, 17:Human health and social work activities, 18:Arts, entertainment and recreation, 19:Other service activities, 20:Activities of households as employers; undifferentiated goods - and services - producing activities of households for own use, 21:Activities of extraterritorial organisations and bodies, 555:Other,

[7] I3: I3 - Which type of stove is stove %STOVENUM%?

Options: 1:Three-stone fire stove, 2:Mong/Siam stove, 3:Traditional Kampong Chhnang stove, 4:Traditional Lao stove, 5:Neang Kangrey stove, 6:New Lao stove, 7:Biogas stove, 8:LPG stove, 9:Electric stove (does not include rice cooker), 10:Cement stove, 11:Prime stove, 12:Ace 1 stove, 13:Mimi-moto stove, 14:3G stove, 15:TreXanh stove, 16:Electric rice cooker, 555:Other stove,

APPENDIX B — VARIABLES

[1] GRIDFEE:

100*Math.Round((Quest.IRnd() < 0.14) ? (0) : ((Quest.IRnd() >= 0.14 && Quest.IRnd() < 0.29) ? (0.14*122000/100) : ((Quest.IRnd() >= 0.29 && Quest.IRnd() < 0.43) ? (0.29*122000/100) : ((Quest.IRnd() >= 0.43 && Quest.IRnd() < 0.57) ? (0.43*122000/100) : ((Quest.IRnd() >= 0.57 && Quest.IRnd() < 0.71) ? (0.57*122000/100) : ((Quest.IRnd() >= 0.71 && Quest.IRnd() < 0.85) ? (0.71*122000/100) : 122000/100))))) ,0);

[2] GRIDFEE3:

100*Math.Round((Quest.IRnd() < 0.14) ? (0) : ((Quest.IRnd() >= 0.14 && Quest.IRnd() < 0.29) ? (0.14*122000/300) : ((Quest.IRnd() >= 0.29 && Quest.IRnd() < 0.43) ? (0.29*122000/300) : ((Quest.IRnd() >= 0.43 && Quest.IRnd() < 0.57) ? (0.43*122000/300) : ((Quest.IRnd() >= 0.57 && Quest.IRnd() < 0.71) ? (0.57*122000/300) : ((Quest.IRnd() >= 0.71 && Quest.IRnd() < 0.85) ? (0.71*122000/300) : 122000/300))))) ,0);

[3] GRIDFEE6:

100*Math.Round((Quest.IRnd() < 0.14) ? (0) : ((Quest.IRnd() >= 0.14 && Quest.IRnd() < 0.29) ? (0.14*122000/600) : ((Quest.IRnd() >= 0.29 && Quest.IRnd() < 0.43) ? (0.29*122000/600) : ((Quest.IRnd() >= 0.43 && Quest.IRnd() < 0.57) ? (0.43*122000/600) : ((Quest.IRnd() >= 0.57 && Quest.IRnd() < 0.71) ? (0.57*122000/600) : ((Quest.IRnd() >= 0.71 && Quest.IRnd() < 0.85) ? (0.71*122000/600) : 122000/600))))) ,0);

[4] GRIDFEE12:

100*Math.Round((Quest.IRnd() < 0.14) ? (0) : ((Quest.IRnd() >= 0.14 && Quest.IRnd() < 0.29) ? (0.14*122000/1200) : ((Quest.IRnd() >= 0.29 && Quest.IRnd() < 0.43) ? (0.29*122000/1200) : ((Quest.IRnd() >= 0.43 && Quest.IRnd() < 0.57) ? (0.43*122000/1200) : ((Quest.IRnd() >= 0.57 && Quest.IRnd() < 0.71) ? (0.57*122000/1200) : ((Quest.IRnd() >= 0.71 && Quest.IRnd() < 0.85) ? (0.71*122000/1200) : 122000/1200))))) ,0);

[5] SOLARFEE:

100*Math.Round((Quest.IRnd() < 0.166) ? 0.33*1600000/100 : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*1600000/100) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (1600000/100) : ((Quest.IRnd() >= 0.5 && Quest.IRnd() < 0.667) ? (0.33*400000/100) : ((Quest.IRnd() >= 0.667 && Quest.IRnd() < 0.833) ? (0.66*400000/100) : 400000/100)))) ,0);

[6] SOLARFEE6:

100*Math.Round((Quest.IRnd() < 0.166) ? 0.33*1600000/600 : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*1600000/600) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (1600000/600) : ((Quest.IRnd() >= 0.5 && Quest.IRnd() < 0.667) ? (0.33*400000/600) : ((Quest.IRnd() >= 0.667 && Quest.IRnd() < 0.833) ? (0.66*400000/600) : 400000/600)))) ,0);

[7] SOLARFEE12:

100*Math.Round((Quest.IRnd() < 0.166) ? 0.33*1600000/1200 : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*1600000/1200) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (1600000/1200) : ((Quest.IRnd() >= 0.5 && Quest.IRnd() < 0.667) ? (0.33*400000/1200) : ((Quest.IRnd() >= 0.667 && Quest.IRnd() < 0.833) ? (0.66*400000/1200) : 400000/1200)))) ,0);

[8] SOLARFEE24:

100*Math.Round((Quest.IRnd() < 0.166) ? 0.33*1600000/2400 : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*1600000/2400) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (1600000/2400) : ((Quest.IRnd() >= 0.5 && Quest.IRnd() < 0.667) ? (0.33*400000/2400) : ((Quest.IRnd() >= 0.667 && Quest.IRnd() < 0.833) ? (0.66*400000/2400) : 400000/2400)))) ,0);

[9] STOVEFEECHARCOALNONLS:

100*Math.Round((Quest.IRnd() < 0.167) ? (0.33*60000/100) : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*60000/100) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (60000/100) : ((Quest.IRnd() >= 0.5 && Quest.IRnd() < 0.667) ? (0.33*14000/100) : ((Quest.IRnd() >= 0.667 && Quest.IRnd() < 0.833) ? (0.66*14000/100) : 14000/100)))) ,0);

[10] STOVEFEECHARCOALNONLS6:

100*Math.Round((Quest.IRnd() < 0.167) ? (0.33*60000/600) : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*60000/600) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (60000/600) : ((Quest.IRnd() >= 0.5 && Quest.IRnd() < 0.667) ? (0.33*14000/600) : ((Quest.IRnd() >= 0.667 && Quest.IRnd() < 0.833) ? (0.66*14000/600) : 14000/600)))) ,0);

[11] STOVEFEECHARCOALNONLS12:

100*Math.Round((Quest.IRnd() < 0.167) ? (0.33*60000/1200) : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*60000/1200) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (60000/1200) : ((Quest.IRnd() >= 0.5 && Quest.IRnd() < 0.667) ? (0.33*14000/1200) : ((Quest.IRnd() >= 0.667 && Quest.IRnd() < 0.833) ? (0.66*14000/1200) : 14000/1200)))) ,0);

[12] STOVEFEECHARCOALNONLS24:

100*Math.Round((Quest.IRnd() < 0.167) ? (0.33*60000/2400) : ((Quest.IRnd() >= 0.167 && Quest.IRnd() < 0.333) ? (0.66*60000/2400) : ((Quest.IRnd() >= 0.333 && Quest.IRnd() < 0.5) ? (60000/2400) : ((Quest.IRnd() >= 0.5 && Quest.IRnd() < 0.667) ? (0.33*14000/2400) : ((Quest.IRnd() >= 0.667 && Quest.IRnd() < 0.833) ? (0.66*14000/2400) : 14000/2400)))) ,0);

[13] STOVEFEEWOODNONKS:

100*Math.Round((Quest.IRnd() < 0.2) ? (0.33*160000/100) : ((Quest.IRnd() >= 0.2 && Quest.IRnd() < 0.4) ? (0.66*160000/100) : ((Quest.IRnd() >= 0.4 && Quest.IRnd() < 0.6) ? (160000/100) : ((Quest.IRnd() >= 0.6 && Quest.IRnd() < 0.733) ? (0.33*6400/100) : ((Quest.IRnd() >= 0.733 && Quest.IRnd() < 0.867) ? (0.66*6400/100) : 6400/100)))) ,0);

[14] STOVEFEEWOODNONKS6:

100*Math.Round((Quest.IRnd() < 0.2) ? (0.33*160000/600) : ((Quest.IRnd() >= 0.2 && Quest.IRnd() < 0.4) ? (0.66*160000/600) : ((Quest.IRnd() >= 0.4 && Quest.IRnd() < 0.6) ? (160000/600) : ((Quest.IRnd() >= 0.6 && Quest.IRnd() < 0.733) ? (0.33*6400/600) : ((Quest.IRnd() >= 0.733 && Quest.IRnd() < 0.867) ? (0.66*6400/600) : 6400/600)))) ,0);

[15] STOVEFEEWOODNONKS12:

100*Math.Round((Quest.IRnd() < 0.2) ? (0.33*160000/1200) : ((Quest.IRnd() >= 0.2 && Quest.IRnd() < 0.4) ? (0.66*160000/1200) : ((Quest.IRnd() >= 0.4 && Quest.IRnd() < 0.6) ? (160000/1200) : ((Quest.IRnd() >= 0.6 && Quest.IRnd() < 0.733) ? (0.33*6400/1200) : ((Quest.IRnd() >= 0.733 && Quest.IRnd() < 0.867) ? (0.66*6400/1200) : 6400/1200)))) ,0);

[16] STOVEFEEWOODNONKS24:

100*Math.Round((Quest.IRnd() < 0.2) ? (0.33*160000/2400) : ((Quest.IRnd() >= 0.2 && Quest.IRnd() < 0.4) ? (0.66*160000/2400) : ((Quest.IRnd() >= 0.4 && Quest.IRnd() < 0.6) ? (160000/2400) : ((Quest.IRnd() >= 0.6 && Quest.IRnd() < 0.733) ? (0.33*6400/2400) : ((Quest.IRnd() >= 0.733 && Quest.IRnd() < 0.867) ? (0.66*6400/2400) : 6400/2400)))) ,0);

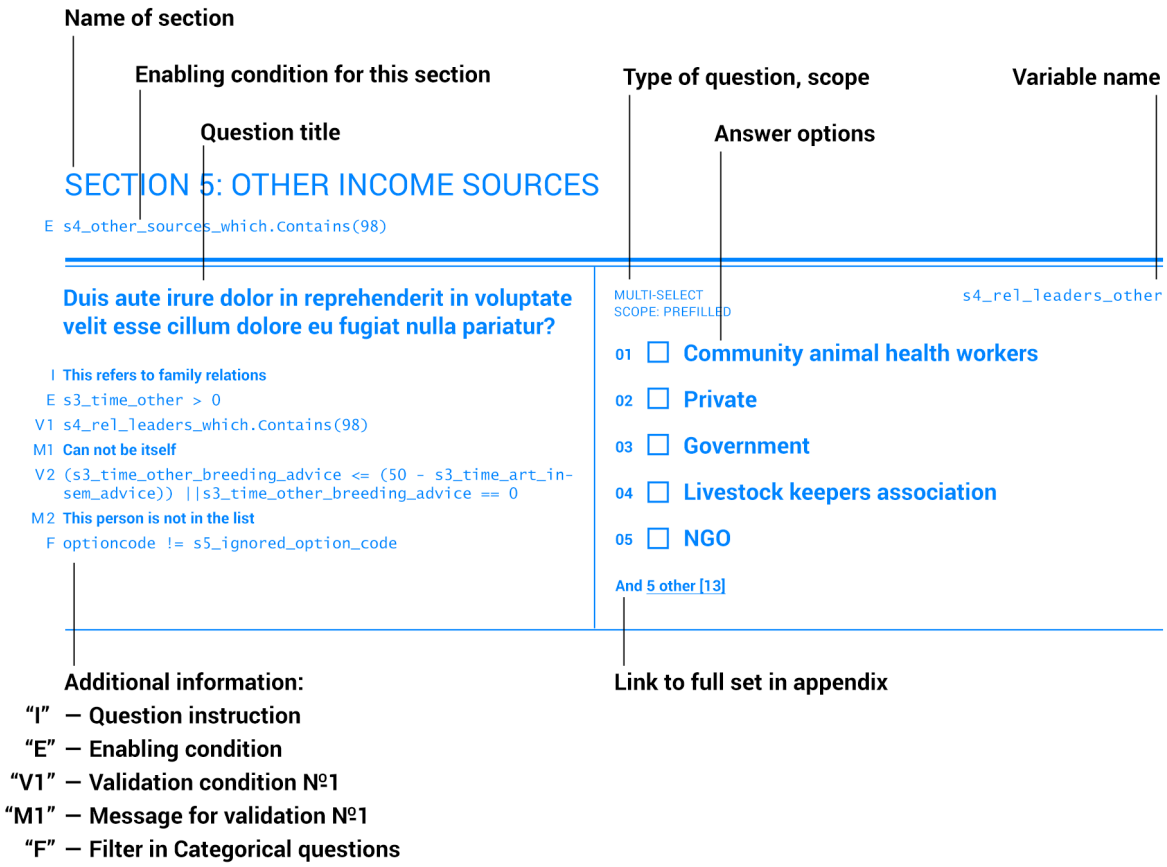
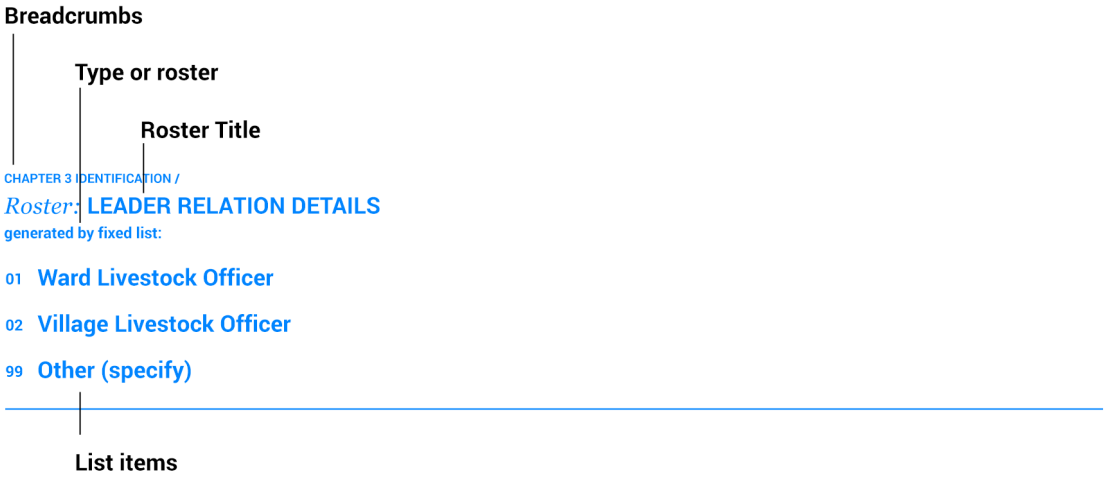
APPENDIX C — OPTIONS FILTERS

[1] I18a: I18a - In the last %MONTHUSE% months, what is the fuel you have used the most on this cookstove?

(@optioncode==1 && (I3==8 || I3==555)) || (@optioncode==2 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==3 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==4 && ((I3>=1 && I3<=6) || I3==10 || I3==555)) || (@optioncode==5 && I3==555) || (@optioncode==6 && I3==555) || (@optioncode==7 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==8 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==9 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==10 && (I3==9 || I3==16 || I3==555)) || (@optioncode==11 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==12 && (I3==7 || I3==555)) || (@optioncode==555)

[2] I18c: I18c - In the last %MONTHUSE% months, what is the fuel you have used the second most on this cookstove?

(@optioncode==1 && (I3==8 || I3==555)) || (@optioncode==2 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==3 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==4 && ((I3>=1 && I3<=6) || I3==10 || I3==555)) || (@optioncode==5 && I3==555) || (@optioncode==6 && I3==555) || (@optioncode==7 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==8 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==9 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==10 && (I3==9 || I3==16 || I3==555)) || (@optioncode==11 && ((I3>=1 && I3<=6) || (I3>=10 && I3<=15) || I3==555)) || (@optioncode==12 && (I3==7 || I3==555)) || (@optioncode==555)

LEGEND

Legend and structure of information in this file