Survey Solutions

01 MTF EAS - HHD

ENUMERATION CONTROLS
Sub-sections: 3, No rosters, Questions: 19.

A. HOUSEHOLD ROSTER
Sub-sections: 3, Rosters: 9, Questions: 62, Static texts: 5.

B. HOUSEHOLD CHARACTERISTICS
Sub-sections: 5, No rosters, Questions: 56, Static texts: 2.

C. SUPPLY AND DEMAND OF ELECTRICITY
No sub-sections, Rosters: 1, Questions: 3, Static texts: 1.

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID
Sub-sections: 6, Rosters: 1, Questions: 56, Static texts: 1.

C.2 USE OF ELECTRICITY SERVICE FROM MINI GRID
Sub-sections: 5, Rosters: 1, Questions: 57, Static texts: 1.

C.3 USE OF ELECTRICITY FROM ELECTRIC GENERATOR SET
Sub-sections: 5, Rosters: 1, Questions: 43, Static texts: 1.

C.4 USE OF EXTERNALLY RECHARGED BATTERY
Sub-sections: 4, Rosters: 2, Questions: 26, Static texts: 1.

C.5 SOLAR BASED DEVICES
Sub-sections: 3, Rosters: 2, Questions: 51, Static texts: 3.

C.6,7,8 ELECTRICITY, CHARGING, STREET LIGHTING
Sub-sections: 3, No rosters, Questions: 15, Static texts: 1.

D. WILLINGNESS TO PAY FOR ELECTRICITY
Sub-sections: 19, No rosters, Questions: 121, Static texts: 3.

E. CANDLE LIGHTING, DIESEL, KAROSENE FUEL FOR LAMP LIGHTING
Sub-sections: 2, Rosters: 1, Questions: 24, Static texts: 1.

F. USE OF DRY CELL BATTERIES (SIZE D, AA, AAA AND OTHER SIZES)
Sub-sections: 2, Rosters: 2, Questions: 11.

G. HOUSEHOLD FUEL CONSUMPTION
Sub-sections: 11, No rosters, Questions: 79, Static texts: 8.

H. COOKING AND HEATING SOLUTIONS
Sub-sections: 8, Rosters: 2, Questions: 91, Static texts: 2.

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

J. LAND OWNERSHIP, OTHER ASSETS AND BUSINESS AT HOME

Sub-sections: 4, No rosters, Questions: 63, Static texts: 2.

K. ATTITUDE
Sub-sections: 6, No rosters, Questions: 40, Static texts: 6.

L. WOMEN'S EMPOWERMENT
Sub-sections: 2, No rosters, Questions: 25, Static texts: 2.

GEO B
No sub-sections, No rosters, Questions: 3.

APPENDIX A — ENABLING CONDITIONS

APPENDIX B — VALIDATION CONDITIONS AND MESSAGES

APPENDIX C — OPTIONS

LEGEND

ENUMERATION CONTROLS

HOUSEHOLD IDENTIFICATION

ID1_01. State/ Region	SINGLE-SELECT	ID1_01

- 01 ○ 01-Kachin
- 02 ○ 02-Kayah
- 03 ○ 03-Kayin
- 04 ○ 04-Chin
- 05 ○ 05-Sagaing
- 06 ○ 06-Tanintharyi
- 07 ○ 07-Bago
- 08 ○ 08-Magway
- 09 ○ 09-Mandalay
- 10 ○ 10-Mon
- 11 ○ 11-Rakhine
- 12 ○ 12-Yangon
- 13 ○ 13-Shan
- 14 ○ 14-Ayeyawady
- 15 ○ 15-Naypyitaw

ID1_02. Govt. Grid Electrification (Office)	SINGLE-SELECT: CASCADING	ID1_02

- 011 ○ Kachin - Urban/ Electrified (Govt. grid)
- 012 ○ Kachin - Urban/ Non-electrified (Govt. grid)
- 013 ○ Kachin - Rural/ Electrified (Govt. grid)
- 014 ○ Kachin - Rural/ Non-electrified (Govt. grid)
- 023 ○ Kayah - Rural/ Electrified (Govt. grid)
- 032 ○ Kayin - Urban/ Non-electrified (Govt. grid)
- 033 ○ Kayin - Rural/ Electrified (Govt. grid)
- 034 ○ Kayin - Rural/ Non-electrified (Govt. grid)
- 041 ○ Chin - Urban/ Electrified (Govt. grid)
- 042 ○ Chin - Urban/ Non-electrified (Govt. grid)
- 044 ○ Chin - Rural/ Non-electrified (Govt. grid)
- 051 ○ Sagaing - Urban/ Electrified (Govt. grid)
- 052 ○ Sagaing - Urban/ Non-electrified (Govt. grid)
- 053 ○ Sagaing - Rural/ Electrified (Govt. grid)
- 054 ○ Sagaing - Rural/ Non-electrified (Govt. grid)
- 062 ○ Tanintharyi - Urban/ Non-electrified (Govt. grid)

And 32 other [1]

ID1_03. EA Code & Name	SINGLE-SELECT: CASCADING	ID1_03

- 01101 ○ 10101124005 - Myitkyina - Myo Thit Gyi(W)

	01102 ○ 10105102001 - Chiphwe - Oke Kat(W)
	01203 ○ 10104104502 - Tanaing - Kin Sar(W)
	01204 ○ 10203101007 - Phakant - Maw Wam Ward(W)
	01205 ○ 10401102001 - Putao - Ho Kho(W)
	01306 ○ 10201711002 - Mohnyin - Nyaung Pin Thar(VT)
	01407 ○ 10203704026 - Phakant - Haung Par(VT)
	02301 ○ 20101708007 - Loikaw - Chi Kel(VT)
	02302 ○ 20102711005 - Dimawso - Demoso(VT)
	03201 ○ 30152102001 - Shan Ywathit(Sub-Tsp) - No (2)(W)
	03202 ○ 30301103002 - Myawady - Kyan Khin Su(W)
	03203 ○ 30301104003 - Myawady - Myanmar Su(W)
	03204 ○ 30301104043 - Myawady - Myanmar Su(W)
	03205 ○ 30301105029 - Myawady - Ah Nauk Paing(W)
	03206 ○ 30401105001 - Kawkareik - Auk Taung Thu Su(W)
	03207 ○ 30401203003 - Kawkareik - No (3)(W)
	And 214 other [2]

ID1_04. Locality (Urban/ Rural)

SINGLE-SELECT   ID1 04

01 ○ Urban
02 ○ Rural

ID1_05. Current Govt. Grid Electrification

SINGLE-SELECT   ID1 05

01 ○ Govt. Grid Electrified
02 ○ Govt. Grid Non-Electrified

ID1_06. Household ID

V1 `self>=1 && self<=15`
M1 Between 1 and 15

NUMERIC: INTEGER   ID1_06

- -

ID2_01. Ward/ Village Tract

TEXT   ID2 01

ID2_02. Village

TEXT   ID2 02

Name of Household Head

TEXT   NameHHead

Address

TEXT   Address

Household Head Phone Num.

TEXT   Phone

ENUMERATION CONTROLS
INTERVIEW DETIALS

ID3_01. Supervisor ID: |__|__| NAME:	TEXT ID3_01
	....
ID3_02. Enumerator ID: |__|__| NAME:	TEXT ID3_02
	....

ENUMERATION CONTROLS
ENUMERATION HISTORY

ID4_01a. First Visit: Capture GPS Coordinates of the Dwelling	GPS ID4_01a
	N -------------------------------
	W -------------------------------
	A -------------------------------
ID4_01b. Can you conduct interview on the first visit?	SINGLE-SELECT ID4_01b 01 ◯ Can conduct interview 02 ◯ Need to come back again
ID4_02a. Second Visit: Capture GPS Coordinates of the Dwelling E ID4_01b==2	GPS ID4_02a
	N -------------------------------
	W -------------------------------
	A -------------------------------
ID4_02a. Can you conduct interview on the second visit? E ID4_01b==2	SINGLE-SELECT ID4_02b 01 ◯ Can conduct interview 02 ◯ Need to come back again
ID4_03a. Third Visit: Capture GPS Coordinates of the Dwelling E ID4_02b==2	GPS ID4_03a
	N -------------------------------
	W -------------------------------
	A -------------------------------
ID4_03b. Can you conduct interview on the third visit? E ID4_02b==2	SINGLE-SELECT ID4_03b 01 ◯ Can conduct interview 02 ◯ Need to come back again

A. HOUSEHOLD ROSTER

A. HOUSEHOLD ROSTER
A.1 NO. OF HOUSEHOLD MEMBERS

STATIC TEXT

Household can be one person (i.e. single person household) or a group of two or more (i.e. a multi-person household) persons living together who make common provisions for food and other essentials for living. First, I would like to make a complete list of all the members of this household, that is, all the persons who usually sleep in this dwelling, eat most

of their meals here, and share expenses together. Include all the members of your family, including any children or other persons who may be away for study or work, but who consider this their permanent residence. Also include any other persons who do not have household elsewhere and not related to you but who normally sleep, eat most of their meals here, and share expenses (for example, servants, lodgers, or other persons who is not relatives). DO NOT LIST HOUSEHELP WHO HAVE A HOUSEHOLD ELSEWHERE, AND GUESTS WHO ARE VISITING TEMPORARILY AND HAVE A HOUSEHOLD ELSEWHERE.

STATIC TEXT

How many people who are ... are there in this household? [Record number]

A01_01. Your immediate family who have lived and eaten their meals together here for at least 6 months (in total) during the past 12 months. Number	NUMERIC: INTEGER A01_01 ------------------------------------
A01_02. Normally live and eat their meals here in household members studying elsewhere or traveling. (in country) Number	NUMERIC: INTEGER A01_02 ------------------------------------
A01_03. Normally live and eat their meals here in household members studying elsewhere or traveling. (other Country) Number	NUMERIC: INTEGER A01_03 ------------------------------------
A01_04. Any other persons not related to you or other household members, but who normally live and eat their meals together here, example, servants, lodgers, or other who are not relatives. Number	NUMERIC: INTEGER A01_04 ------------------------------------

A01_05. Total No. of household members

NUMERIC: INTEGER   A01_05

I   Make a complete list of all individuals who normally live and eat their meals together in this household, starting with the head of household.
V1 self==(A01_01+A01_02+A01_03+A01_04)
M1 equal sum of hh member

STATIC TEXT

Now, I would like to ask you some information about the people living in this household, as mentioned earlier. Make a complete list of all individuals who normally live and eat their meals together in this household, starting with the head of household. Please tell me the names and following details all the people who live in this house in the following probing sequence: 1. Household Head, a person making the main decisions in the household: Household head can be either male or female. Ask his/her name first and record in the first row of household roster. 2. Spouse of household head (if exists) 3. Immediate family of household head who have lived and eaten their meals together here for at least 6 months (in total) during the past 12 months. 4. Any other persons related to you or other household members who normally live and eat their meals together here. 5. Normally live and eat their meals here in household members studying elsewhere or traveling. 6. Any other persons not related to you or other household members, but who normally live and eat their meals together here, example, servants, lodgers, or other who are not relatives.

A. HOUSEHOLD ROSTER
Roster: A.2 HOUSEHOLD MEMBER IDENTIFICATION
generated by numeric question A01_05   A_HHM_Roster

A02_01. Name First then Last Name	TEXT A02_01 ....
A02_02. Is %A02_01% male or female?	SINGLE-SELECT A02_02 01 ○ Male 02 ○ Female
A02_03. What is the relationship of %A02_01% to household head?	SINGLE-SELECT A02_03 01 ○ Household head 02 ○ Spouse

	03 ◯ Children
	04 ◯ Son-in-law /Daughter-in-law
	05 ◯ Grandchild/ Great grandchild
	06 ◯ Parents / Parents-in-law
	07 ◯ Sibling
	08 ◯ Grandfather/ Grandmother
	09 ◯ Others – Relative
	10 ◯ Adopted son/daughter
	11 ◯ Others – Non-relative

A02_04. How old is %A02_01%? YEARS

NUMERIC: INTEGER   A02_04

I   Record "0" if infant below 1 year old.

A02_06. What is %A02_01%'s marital status?

SINGLE-SELECT   A02_06

E   A02_04>=12

001 ◯ Single
002 ◯ Married
003 ◯ Separated/ Divorced
004 ◯ Widowed
555 ◯ Other (specify)

A02_06Other. Other (specify)

TEXT   A02_06Other

E   A02_06==5

A02_07. Is %A02_01%'s currently living at home or traveling?

SINGLE-SELECT   A02_07

01 ◯ Currently living at home
02 ◯ On overnight traveling, will not get back during field visit
03 ◯ Staying in other town/ village for education
04 ◯ Staying in other country for education
05 ◯ Staying in other town/ village for work
06 ◯ Staying in other country for work

Aresp1. Enumerator: Record Respondent ID for this section Individual ID from Household Roster

SINGLE-SELECT: LINKED   Aresp1

Aresp2. Enumerator: Record Respondent ID for this section Individual ID from Household Roster

SINGLE-SELECT: LINKED   Aresp2

A. HOUSEHOLD ROSTER
Roster: A.3 A.3 EDUCATION/ STUDY TIME FOR AGED 5 YEARS AND ABOVE
generated by numeric question A01_05   A3_FiveYearsAbove

E   A02_04>=5

A03_02. Has %A02_01% ever attended school?

SINGLE-SELECT   A03_02

01 ◯ Yes
02 ◯ No

A03_03. Is %A02_01% currently attending school?

SINGLE-SELECT   A03_03

01 ◯ Yes
02 ◯ No

E   A03_02==1

A03_04. What is the highest educational qualification acquired by %A02_01%?

SINGLE-SELECT   A03_04

00 ◯ attending grade 1

01	◯	Grade 1 (Kindergarten, Pre-primary)
02	◯	Grade 2 (1st std., Primary)
03	◯	Grade 3 (2nd std., Primary)
04	◯	Grade 4 (3rd std., Primary)
05	◯	Grade 5 (4th std., Primary)
06	◯	Grade 6 (5th std., Middle school)
07	◯	Grade 7 (6th std., Middle school)
08	◯	Grade 8 (7th std., Middle school)
09	◯	Grade 9 (8th std., Middle school)
10	◯	Grade 10 (9th std., High school)
11	◯	Grade 11 (10th std., High school)
12	◯	University/College classes (Tertiary)
13	◯	Vocational trainings
14	◯	Diploma (Tertiary)
20	◯	Bachelor's Degree (BSc/ BA)

And 4 other [3]

A03_05. Does %A02_01% live in this household during school years?

E A03_02==1

SINGLE-SELECT   A03_05

01 ◯ Yes
02 ◯ No

A03_06. How many minutes per day does he/she study at home during the day, before sunset? Minutes

I If NO write "0" (Instruction: FOR DO NOT LIVE AT HOME DURING THE SCHOOL YEAR)
E A03_05==1

NUMERIC: INTEGER   A03_06

- -

A03_07. How many minutes does he/she study or read at home after evening? Minutes

I If NO write "0" "(Instruction: FOR DO NOT LIVE AT HOME DURING THE SCHOOL YEAR)
E A03_05==1

NUMERIC: INTEGER   A03_07

- -

A. HOUSEHOLD ROSTER
Roster: A.4 FOR AGE 15 YEARS AND ABOVE
generated by numeric question A01_05   A4_FifteenYearsAbove

E A02_04>=15

A04_02. What was %A02_01%'s main occupation for the last 12 months?

SINGLE-SELECT   A04_02

001 ◯ Wage Employee, Non-Farm
002 ◯ Wage Employee, Farm
003 ◯ Self-Employed Non-Farm-Business enterprise
004 ◯ Self-Employed Non-Farm-Independent contractor, technician, rofessional, etc
005 ◯ Self-Employed Agriculture/Livestock
006 ◯ Assistance in family enterprise
007 ◯ Casual labor/Day Laborer/ Farm
008 ◯ Intern/free labor/voluntary work
009 ◯ Student

	010 ○ Retired/pensioner
	011 ○ Too old to work
	012 ○ Disabled
	013 ○ Job Seeker
	014 ○ Unemployed
	015 ○ House wife/husband
	555 ○ Other (specify)

| A04_02Other. Other (specify) | TEXT | A04 02Other |
| E `A04_02==555` | .... |

A04_03. Please describe the kind of trade or business %A02_01%'s main occupation best fits from the list of industries.

E `A04_02.InList(1,2,3,4,5,8,555)`

SINGLE-SELECT   A04 03

- 01 ○ A - Agriculture, forestry and fishing
- 02 ○ B - Mining and quarrying
- 03 ○ C - Manufacturing
- 04 ○ D - Electricity, gas, steam and air conditioning supply
- 05 ○ E - Water supply; sewerage, waste management and remediation activities
- 06 ○ F - Construction
- 07 ○ G - Wholesale and retail trade; repair of motor vehicles and motorcycles
- 08 ○ H - Transportation and storage
- 09 ○ I - Accommodation and food service activities
- 10 ○ J - Information and communication
- 11 ○ K - Financial and insurance activities
- 12 ○ L - Real estate activities
- 13 ○ M - Professional, scientific and technical activities
- 14 ○ N - Administrative and support service activities
- 15 ○ O - Public administration and defense; compulsory social security
- 16 ○ P - Education

And 5 other [4]

A04_04. Out of the last 12 months, how many months were you engaged in this activity? _____ Months (Max 12 months)

E `A04_02.InList(1,2,3,4,5,6,7,8,555)`
V1 `self<=12`
M1 Max 12

NUMERIC: INTEGER   A04 04

- -

A04_05. How many days per month does %A02_01% work in this activity?

E `A04_02.InList(1,2,3,4,5,6,7,8,555)`
V1 `self<=31`
M1 Max 31

NUMERIC: INTEGER   A04 05

- -

A04_06. Please indicate the typical monthly income for this activity. _____ Kyat

E `A04_02.InList(1,2,3,4,5,6,7,8,555)`

NUMERIC: INTEGER   A04_06

- -

A04_07. Does %A02_01% operate any non-agricultural/ business/ enterprise within this household or compound?

SINGLE-SELECT   A04 07

- 01 ○ Yes
- 02 ○ No

E   `A04_02.InList(1,2,3,4,5,6,7,8,555)`

A04_08. How many employees are there in this business/ enterprise? Number of employees including full time and Part time	NUMERIC: INTEGER A04 08

E   `A04_02.InList(1,2,3,4,5,6,7,8,555) && A04_07==1`

A. HOUSEHOLD ROSTER
A.5 REGULAR ACTIVITIES WITH HOUSEHOLD FOR AGED 10 YEARS AND ABOVE

A. HOUSEHOLD ROSTER / A.5 REGULAR ACTIVITIES WITH HOUSEHOLD FOR AGED 10 YEARS AND ABOVE
Roster: A.5.A INDIVIDUAL'S ACTIVITIES IN THE HOUSEHOLD
generated by numeric question A01 05   A5A_ActivitiesIndividual

E   `A02_04>=10 && A02_07.InList(1,2)`

A05a01. Does %A02_01% do any of the following activity in the household?	MULTI-SELECT A05a01
	01 ☐ Work for household chors
	02 ☐ Caring, attending, or playing with/ for younger children
	03 ☐ Helping with school work for children
	04 ☐ Entertainment and socializing
	05 ☐ None of the above

A05a02. How many hours and minutes per day does he/she work for household chores? Record answer in Minutes	NUMERIC: INTEGER A05a02

E   `A05a01.Contains(1)`

A05a03. In a typical day, how many total minutes did [PEOPLE] spend... Caring, attending, or playing with/for younger children Minutes	NUMERIC: INTEGER A05a03

E   `A05a01.Contains(2)`

A05a04. In a typical day, how many total minutes did [PEOPLE] spend... Studying or helping with school work Minutes	NUMERIC: INTEGER A05a04

E   `A05a01.Contains(3)`

A05a05. In a typical day, how many total minutes did [PEOPLE] spend... Time spent on entertainment and socializing Minutes	NUMERIC: INTEGER A05a05

E   `A05a01.Contains(4)`

A. HOUSEHOLD ROSTER / A.5 REGULAR ACTIVITIES WITH HOUSEHOLD FOR AGED 10 YEARS AND ABOVE
Roster: A.5.B COOKING AND PREPARATION FOR COOKING
generated by numeric question A01 05   A5B_ActivitiesCooking

E   `A02_04>=10 && A02_07.InList(1,2)`

A05b01. Does [NAME] cook food for the household (OR) help in cooking?	SINGLE-SELECT A05b01
	01 ○ I cook for household
	02 ○ I help in cooking
	03 ○ Never

A05b02. How frequently does [NAME] cook food for the household (OR) help in cooking?	SINGLE-SELECT A05b02
	01 ○ Everyday

E	A05b01.InList(1,2)	02 ◯ A few times in a week
		03 ◯ Once a week
		04 ◯ A few times in a Month
		05 ◯ Once a month

A05b03. Does [NAME] do any of the following activity in the household?	MULTI-SELECT A05b03
	01 ☐ Gathering, collecting or purchasing fuels for household
	02 ☐ Preparing fuel/energy source (chopping, making pellets)
	03 ☐ Cooking (food, tea, boiling water)
	04 ☐ Using stove or space heaters for other (Doing household chores)
	05 ☐ Other time spent in cooking area(s)
	06 ☐ None of the above

A05b04. In a typical day, how many total minutes did [PEOPLE] spend... Gathering, collecting or purchasing fuels including travel time Minutes	NUMERIC: INTEGER A05b04
E A05b03.Contains(1)	--

A05b05. In a typical day, how many total minutes did [PEOPLE] spend... Preparing fuel/energy source (chopping, making pellets) Minutes	NUMERIC: INTEGER A05b05
E A05b03.Contains(2)	--

A05b06. In a typical day, how many total minutes did [PEOPLE] spend... Cooking (food, tea, boiling water) Minutes	NUMERIC: INTEGER A05b06
E A05b03.Contains(3)	--

A05b07. In a typical day, how many total minutes did [PEOPLE] spend... Using stove or space heaters for other (Doing household chores) Minutes	NUMERIC: INTEGER A05b07
E A05b03.Contains(4)	--

A05b08. In a typical day, how many total minutes did [PEOPLE] spend... Other time spent in cooking area(s) Minutes	NUMERIC: INTEGER A05b08
E A05b03.Contains(5)	--

A. HOUSEHOLD ROSTER / A.5 REGULAR ACTIVITIES WITH HOUSEHOLD FOR AGED 10 YEARS AND ABOVE

Roster: A.5.C INCOME GENERATION ACTIVITY AT HOME

generated by numeric question A01 05   A5C_ActivitiesIncome

E A02_04>=10 && A02_07.InList(1,2)

A05c01. Does [NAME] do any of the following income generating activity in the household?	MULTI-SELECT A05c01
	01 ☐ Working for pay outside of the house
	02 ☐ Income generating activities inside the house
	03 ☐ Helping with school work for children
	04 ☐ Entertainment and socializing

A05c02. For income generation: In a typical day, how many total minutes did [PEOPLE] spend... Working for pay outside of the house (employed and self-employed) Minutes E `A05c01.Contains(1)`	NUMERIC: INTEGER A05c02 -------------------------------
A05c03. For income generation: In a typical day, how many total minutes did [PEOPLE] spend... Income generating activities inside the house Minutes E `A05c01.Contains(2)`	NUMERIC: INTEGER A05c03 -------------------------------
A05c04. How many hours and minutes per day does he/she work in IGAs in the household AT NIGHT OR EVENING AFTER DARK? Record answer in Minutes E `A05c01.ContainsAny(1,2,3,4)`	NUMERIC: INTEGER A05c04 -------------------------------
A05c05. For income generation: In a typical day, how many total minutes did [PEOPLE] spend... Gathering, collecting, purchasing fuels (including travel time) Minutes E `A05c01.ContainsAny(1,2,3,4)`	NUMERIC: INTEGER A05c05 -------------------------------

A. HOUSEHOLD ROSTER
A.6 ILLNESS AND HEALTH IMPACTS

A. HOUSEHOLD ROSTER / A.6 ILLNESS AND HEALTH IMPACTS
Roster: A.6.A ILLNESS IN THE PAST 6 MONTHS
generated by numeric question A01 05   A6A_Illness
E `A02_07.InList(1,2)`

A06a01. Did %A02_01% suffer from illness in last 6 months?	SINGLE-SELECT A06a01 01 ◯ Yes 02 ◯ No
A06a02. How many days were lost due to such illness (paid work, school, and domestic work)? Number of days E `A06a01==1`	NUMERIC: INTEGER A06a02 -------------------------------
A06a03. Did you take any medical service, treatment or medicine for that? E `A06a01==1`	SINGLE-SELECT A06a03 01 ◯ Yes 02 ◯ No
A06a04. Do you get information on health and hygiene from TV, radio, and smart phone?	SINGLE-SELECT A06a04 01 ◯ Yes 02 ◯ No

A. HOUSEHOLD ROSTER / A.6 ILLNESS AND HEALTH IMPACTS
Roster: A.6.B IN THE LAST 14 DAYS
generated by numeric question A01 05   A6B_HHMHealthImpacts14Days
E `A02_07.InList(1,2)`

STATIC TEXT

In the last 14 days, have you experienced

A06b01. Has [Name] experienced an illness with a cough at any time in the last 14 days?	SINGLE-SELECT A06b01 001 ◯ Yes 002 ◯ No 777 ◯ Don't know
A06b02 Has [Name] experienced an illness with a cough, did you go see a doctor/clinic in the last 14 days? E A06b01==1	SINGLE-SELECT A06b02 001 ◯ Yes 002 ◯ No 777 ◯ Don't know
A06b03. Has [Name] experienced an illness with a cough, how many breathed faster than usual with short, rapid breaths or had difficulty breathing in the last 14 days? E A06b01==1	SINGLE-SELECT A06b03 001 ◯ Yes 002 ◯ No 777 ◯ Don't know
A06b04. Has [Name] experienced short, rapid breaths or difficult breathing, experienced a problem in the chest or a blocked or runny nose in the last 14 days?	SINGLE-SELECT A06b04 001 ◯ Chest only 002 ◯ Nose 003 ◯ Both 004 ◯ Other 005 ◯ No 777 ◯ Don't know
A06b05. Has [Name] experienced eye irritation or eye problems in the last 14 days in the last 14 days?	SINGLE-SELECT A06b05 001 ◯ Yes 002 ◯ No 777 ◯ Don't know
A06b06. Which of the following best fit for [Name]? E A02_04>=15	SINGLE-SELECT A06b06 001 ◯ Regular smoker (At least once a day) 002 ◯ Occational smoker (Not smoke once a day) 003 ◯ Previous Smoker 004 ◯ Not a smoker (now OR before) 777 ◯ Don't know

A. HOUSEHOLD ROSTER / A.6 ILLNESS AND HEALTH IMPACTS
Roster: A.6.C IN THE LAST 12 MONTHS
generated by numeric question A01 05   A6C_HHMHealthImpacts12Months

E   A02_07.InList(1,2)

STATIC TEXT

IN THE LAST 12 MONTHS, HAVE YOU EXPERIENCED…

A06c01. Has [Name] experienced Poisoning from liquid fuel in the last 12 months?	SINGLE-SELECT A06c01 001 ◯ Yes 002 ◯ No 777 ◯ Don't know
A06c02. Has [Name] experienced Burns related to cooking or heating or fuel in the last 12 months?	SINGLE-SELECT A06c02 001 ◯ Yes 002 ◯ No 777 ◯ Don't know
A06c03. Has [Name] experienced Of the burns related to fuel--Burns that required a visit to the clinic/hospital in the last 12 months?	SINGLE-SELECT A06c03 001 ◯ Yes

	002 ○ No
	777 ○ Don't know

A06c04. Has [Name] experienced Back or neck problems from carrying fuel for cooking/heating in the last 12 months?	SINGLE-SELECT A06c04
	001 ○ Yes
	002 ○ No
	777 ○ Don't know

A06c05. A50 Has [Name] experienced Electrical injuries (e.g. shocks) that prevent attendance in school/work in the last 12 months?	SINGLE-SELECT A06c05
	001 ○ Yes
	002 ○ No
	777 ○ Don't know

A06c06. Has [Name] experienced Other minor electrical injuries in the last 12 months?	SINGLE-SELECT A06c06
	001 ○ Yes
	002 ○ No
	777 ○ Don't know

B. HOUSEHOLD CHARACTERISTICS

STATIC TEXT

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

Bresp1. Enumerator: Record Respondent ID for this section Individual ID from Household Roster	SINGLE-SELECT: LINKED Bresp1

B. HOUSEHOLD CHARACTERISTICS
B. HOUSEHOLD CHARACTERISTICS

B01_01. Does your household live in this dwelling for the entire year?	SINGLE-SELECT B01 01
	01 ○ Yes
	02 ○ No

B01_02. Is this your main dwelling? The dwelling that you live in for most of the year.	SINGLE-SELECT B01 02
	01 ○ Yes
	02 ○ No

B01_03. How many years have you been living in this community? (Number of years) Record 1 if less than 1. Number of years	NUMERIC: INTEGER B01 03
	- -

B01_04. What is the type of dwelling unit? (Refer to structure type only) (Enumerator, check with observation)	SINGLE-SELECT B01 04
	001 ○ Single family house
	002 ○ Multi-family house
	003 ○ Multi-dwelling building with 3 or more flats/ apartments
	004 ○ Apartment or house with attached business or shop
	005 ○ Room in a hostel
	006 ○ Hut/ improvised housing unit
	555 ○ Other, specify

B01_04Other. Other,Specify	TEXT B01 04Other
E B01_04==555	....

B01_05. How many families live in this dwelling	NUMERIC: INTEGER B01 05

unit?(Number of households)

E   B01_04.InList(2,4,5,555)
V1 self>1
M1 greather than 1

B01_06. Do you own this dwelling?

SINGLE-SELECT   B01_06

- 01 ◯ Yes
- 02 ◯ No

B01_07. Do you use it for free or rent it?

E   B01_06==2

SINGLE-SELECT   B01_07

- 01 ◯ Free
- 02 ◯ Rented

B01_08. How many rooms (excluding the kitchen, toilet, and bathroom) does the household occupy? Record number of rooms

E   B01_07==2

NUMERIC: INTEGER   B01_08

B01_09. The walls of the dwelling are mainly made of what material? Check with observation

SINGLE-SELECT   B01_09

- 01 ◯ Thatch/ large leaves/ Palm/ dhani
- 02 ◯ Bamboo
- 03 ◯ Rudimentary wood
- 04 ◯ Unbaked brick and mud
- 05 ◯ Baked brick and cement
- 07 ◯ Pucca cement
- 08 ◯ Finished wood
- 09 ◯ Tarpaulin
- 10 ◯ Other (Specify)

B01_09Other. Other,Specify

E   B01_09==555

TEXT   B01_09Other

B01_10. The roof of the dwelling is mainly made of what material? Check with observation

SINGLE-SELECT   B01_10

- 001 ◯ Thatch/ large leaves/ Palm/ dhani
- 002 ◯ Bamboo
- 003 ◯ Tin pieces
- 004 ◯ Tiles
- 005 ◯ Corrugated metal
- 006 ◯ Wooden shingles
- 007 ◯ Cement
- 008 ◯ Tarpaulin
- 555 ◯ Other (Specify):

B01_10Other. Other,Specify

E   B01_10==555

TEXT   B01_10Other

B01_11. The floor of the dwelling is mainly made of what material? Check with observation

SINGLE-SELECT   B01_11

- 001 ◯ Earth/ sand
- 002 ◯ Wood planks
- 003 ◯ Palm/ Bamboo
- 004 ◯ Combination earth & wood/ palm/ bamboo
- 005 ◯ Parquet or polished wood
- 006 ◯ Tongue and groove wood
- 007 ◯ Cement
- 008 ◯ Wood with covering
- 009 ◯ Cement with covering
- 010 ◯ Combination cement/ finished wood and other
- 555 ◯ Other (Specify):

B01_11Other. Other,Specify	TEXT	B01 11Other
E B01_11==555	....	

B01_12. What type of toilet facility does your household use? Multiple responses possible.	MULTI-SELECT	B01 12
	001 ☐ None (open field)	
	002 ☐ Flush to sewage	
	003 ☐ Flush to septic tank	
	004 ☐ Pail/Bucket	
	005 ☐ Covered pit latrine	
	006 ☐ Uncovered pit latrine	
	007 ☐ Community latrine	
	555 ☐ Other, specify	

B01_12Other. Other,Specify	TEXT	B01_12Other
E B01_12.Contains(555)	....	

B01_13. TWhat is your household's main source of drinking water?	SINGLE-SELECT	B01 13
	001 ◯ Pipe borne water treated	
	002 ◯ Pipe borne water untreated	
	003 ◯ Bore hole/ hand pump	
	004 ◯ Boiled water	
	005 ◯ Well/spring protected	
	006 ◯ Well/spring unprotected	
	007 ◯ River/spring	
	008 ◯ Lake/reservoir	
	009 ◯ Rain water	
	010 ◯ Tanker/truck/vendor	
	011 ◯ Bottle water	
	555 ◯ Other, specify	

B01_13Other. Other,Specify	TEXT	B01_13Other
E B01_13==555	....	

B01_14. Is your drinking water treated (chemical treatment)?	SINGLE-SELECT	B01_14
	001 ◯ Yes	
	002 ◯ No	
	888 ◯ Don't know	

B. HOUSEHOLD CHARACTERISTICS
B.2 ACCESS TO FINANCE AND MOBILE MONEY

B02_01. Does anyone in the household have a bank account at a formal institution?	SINGLE-SELECT	B02 01
	01 ◯ Yes	
	02 ◯ No	

B02_02. At which institution is this account or savings? Read options aloud	SINGLE-SELECT	B02 02
E B02_01==1	001 ◯ Commercial bank	
	002 ◯ Cooperative credit union	
	003 ◯ Microfinance institution	
	555 ◯ Other, specify	

B02_02Other. Other,Specify	TEXT	B02 02Other
E B02_02==555	....	

B02_03. Does anyone in the household have an account at an informal institution?	SINGLE-SELECT	B02 03
	01 ◯ Yes	
	02 ◯ No	

B02_04. At which informal institution is this account? Multiple responses possible E `B02_03==1`	MULTI-SELECT B02 04 001 ☐ Group savings (rotational) 002 ☐ Group savings (one-time disbursement) 555 ☐ Other, specify
B02_04Other. Other,Specify E `B02_04.Contains(555)`	TEXT B02 04Other ....
B02_05. If you can get a loan/credit, what are the sources of credit/loans? Multiple responses possible	MULTI-SELECT B02 05 001 ☐ Commercial/government bank 002 ☐ Cooperative credit union 003 ☐ Microfinance institution 004 ☐ Rural bank 005 ☐ State loan 006 ☐ NGO 007 ☐ Business firm 008 ☐ Employer 009 ☐ SACCO/Moneylender 010 ☐ Shop 011 ☐ Relative/friend/neighbor 012 ☐ Mobile money services 013 ☐ Cannot get a loan/credit 555 ☐ Other, specify
B02_05Other. Other,Specify E `B02_05.Contains(555)`	TEXT B02_05Other ....
B02_06. Do you have a mobile money account?	SINGLE-SELECT B02 06 01 ◯ Yes 02 ◯ No
B02_07. Do you use mobile money to make payments over the mobile phone? E `B02_06==1`	SINGLE-SELECT B02 07 01 ◯ Yes 02 ◯ No
B02_08. Have you used the account in the past 90 days? E `B02_06==1`	SINGLE-SELECT B02 08 01 ◯ Yes 02 ◯ No
B02_09. How do you use the mobile money services? (Mark all that apply) E `B02_06==1`	MULTI-SELECT B02 09 001 ☐ 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, specify
B02_09Other. Other,Specify E `B02_09.Contains(555)`	TEXT B02_09Other ....

B.3 TRANSPORTATION AND AGRICULTURAL EQUIPMENT OWNERSHIP

STATIC TEXT

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

B. HOUSEHOLD CHARACTERISTICS / B.3 TRANSPORTATION AND AGRICULTURAL EQUIPMENT OWNERSHIP
B.3A. VEHICLES AND PRODUCTIVE ASSETS

B03a_01. How many Domestic vehicle in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_01
B03a_02. How many Commercial vehicle in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_02
B03a_03. How many Motorcycle in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_03
B03a_04. How many Electric bicycle in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_04
B03a_05. How many Bicycle in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_05
B03a_06. How many Motor boat in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_06
B03a_07. How many Other boat in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_07
B03a_08. How many Animal pulled cart in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_08
B03a_09. How many Tractor in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_09
B03a_10. How many Power tiller in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_10
B03a_11. How many Water pump for irrigation in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER B03a_11
B03a_12. How many Motorized crusher for irrigation in (working condition or still healthy)	NUMERIC: INTEGER B03a_12

does your household own? Write 0 if none 0
NEXT ROW

B. HOUSEHOLD CHARACTERISTICS / B.3 TRANSPORTATION AND AGRICULTURAL EQUIPMENT OWNERSHIP

B.3B. DRAUGHT/ BREEDING ANIMALS

B03b_01. How many Cow/bull/calves in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_01
B03b_02. How many Water buffalo in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_02
B03b_03. How many Horse/donkey in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_03
B03b_04. How many Sheep in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_04
B03b_05. How many Goat in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_05
B03b_06. How many Pig in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_06
B03b_07. How many Poultry in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_07
B03b_08. How many Fish (Aquaculture) in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_08
B03b_09. How many Other(specify) in (working condition or still healthy) does your household own? Write 0 if none 0 NEXT ROW	NUMERIC: INTEGER	B03b_09
B03b_09Other. Other(Specify)	TEXT	B03b_09Other

E B03b_09>=1

C. SUPPLY AND DEMAND OF ELECTRICITY

STATIC TEXT

Instructions: This module should be completed by the most knowledgeable member on household electricity. Concerted answers should be allowed.

Cresp1. Enumerator: Record Respondent ID for this section Individual ID from Household	SINGLE-SELECT: LINKED	Cresp1

Roster	

C1. Does your house have the following light buls/ electrical products? Read option

MULTI-SELECT: YES/NO C1

	Yes / No	
101	☐ / ☐	Less than 25W
102	☐ / ☐	Incandescent light bulbs (25W to 40W)
103	☐ / ☐	Incandescent light bulbs (41W to75W)
104	☐ / ☐	Incandescent light bulbs (76W and above)
201	☐ / ☐	Fluorescent light tubes (10 W)
202	☐ / ☐	Fluorescent light tubes (20 W)
203	☐ / ☐	Fluorescent light tubes (40 W)
301	☐ / ☐	Compact fluorescent light bulbs (<9 W)
302	☐ / ☐	Compact fluorescent light bulbs (9W to 15W)
303	☐ / ☐	Compact fluorescent light bulbs (16W-20W)
304	☐ / ☐	Compact fluorescent light bulbs (21W to 30W)
305	☐ / ☐	Compact fluorescent light bulbs (31W to 40W)
306	☐ / ☐	Compact fluorescent light bulbs (41 W – 50W)
307	☐ / ☐	Compact fluorescent light bulbs 51W and above
401	☐ / ☐	LED light bulbs (<9 W)
402	☐ / ☐	LED light bulbs (9W to 15W)

And 44 other [5]

C. SUPPLY AND DEMAND OF ELECTRICITY
Roster: USE OF ELECTRICITY
generated by multi-select question C1   C1_5UseOfElectricity

C2. how many of the %rostertitle% do you have?

NUMERIC: INTEGER C2

- -

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID

C01f01. Is the household connected to Grid, Border or Thai Grid, Township Own Grid, Mini grid or No grid connection at all?

SINGLE-SELECT C01f01

- 01 ○ National grid
- 02 ○ Border or Thai grid
- 03 ○ Township own grid
- 04 ○ Minigrid connection
- 05 ○ No grid connection

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID
C.1.A CONNECTION

E C01f01.InList(1,2,3)

C01a01. How many years have you had this grid connection? Record in years, if less than 1 year record 1 Number of Years Don't know.......................888

NUMERIC: INTEGER C01a01

- -

C01a02. How much did your household pay for the network construction? Local currency Don't know.........................888	NUMERIC: INTEGER C01a02 ------------------------------
C01a03a. How much did your household pay for the connection fee? Refer to connection fee including meter. Local currency Don't know.........................888	NUMERIC: INTEGER C01a03a ------------------------------
C01a03b. How much did your household pay for the internal wiring fee? Do not include the connection fee from C01a02 here Local currency Don't know.........................888	NUMERIC: INTEGER C01a03b ------------------------------
C01a04. How many weeks after you applied for the grid connection did your household get connected? (Insert 0 if immediate) Number of weeks Don't know.........................888	NUMERIC: INTEGER C01a04 ------------------------------
C01a05. How many weeks after you were connected were you able to use electricity in your home? (Insert 0 if immediate) Number of weeks Don't know.........................888	NUMERIC: INTEGER C01a05 ------------------------------
C01a06. Does your house have an electric meter?	SINGLE-SELECT C01a06 01 ◯ Yes 02 ◯ No
C01a07. Does your house share the electric meter? E C01a06==1	SINGLE-SELECT C01a07 01 ◯ Yes 02 ◯ No
C01a08. How many house are sharing the meter? Number of Households E C01a07==1	NUMERIC: INTEGER C01a08 ------------------------------
C01a09. How are you billed for electricity? Read options aloud	SINGLE-SELECT C01a09 001 ◯ Pay by unit as indicated by the meter 002 ◯ Utility estimate consumption 003 ◯ Fixed fee 004 ◯ Pay by number of lights and appliances 005 ◯ No bill for eclectricity or do not have to pay 555 ◯ Other, specify
C01a09Other. Other, Specify E C01a09==555	TEXT C01a09Other ....
C01a10. Who do you pay electricity service to?	SINGLE-SELECT C01a10 001 ◯ Governtment (EPC) or Utility Company 002 ◯ Pay at the bank/post office 003 ◯ Credits using mobile money (to EPC, utility company) 004 ◯ Pay to Relative /Neighbor 005 ◯ Pay to Landlord 006 ◯ Pay no one, do not pay 555 ◯ Other, specify

C01a10Other. Other, Specify	TEXT	C01a10Other
E C01a10==555	....	

C01a11. Enumerator: If the respondent pays the energy company or has a record of the electricity payment, ask to see the electricity bill/invoice and use it for C01a12 and C01a13 .	SINGLE-SELECT	C01a11
	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	

C01a12. In a typical month, how much did you spend on the electric bill? Calculate amount paid from the last bill. Local Currency Don't Know……………………………………888	NUMERIC: INTEGER	C01a12
	– .	

C01a13. In a typical month how much electricity did your household consume? Quantity in Kilowatt Hour (kWh) Don't Know……………………………………888	NUMERIC: INTEGER	C01a13
	– .	

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID

C.1.B AVALIBALITY/ RELIABILITY AND QAULITY OF SERVICE

E C01f01.InList(1,2,3)

C01b01. Is the quality of electricity service the same all year?	SINGLE-SELECT	C01b01
	01 ◯ Yes	
	02 ◯ No	

C01b02a. In the last 12 months, (start from this month) which months have no electric service. (Multiple response)	MULTI-SELECT	C01b02a
	001 ☐ January (ပြာသိုး - ဆောင်း)	
	002 ☐ February (တပို့တွဲ - ဆောင်း)	
V1 (!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) || (self.Contains(777) && !self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14))	003 ☐ March (တပေါင်း - နွေ)	
	004 ☐ April (တန်ခူး - နွေ)	
	005 ☐ May (ကဆုန် - နွေ)	
M1 if choose none, not choose other	006 ☐ June (နယုန် - မိုး)	
	007 ☐ July (ဝါဆို - မိုး)	
	008 ☐ August (ဝါခေါင် - မိုး)	
	009 ☐ September (တော်သလင်း - မိုး)	
	010 ☐ October (သီတင်းကျွတ် - မိုး)	
	011 ☐ November (တန်ဆောင်မုန်း - ဆောင်း)	
	012 ☐ December (နတ်တော် - ဆောင်း)	
	777 ☐ None	

C01b02b. In the last 12 months, (start from this month) which months have the worst electric service. (Multiple response)	MULTI-SELECT	C01b02b
	001 ☐ January (ပြာသိုး - ဆောင်း)	
	002 ☐ February (တပို့တွဲ - ဆောင်း)	
V1 ((C01b02a.Contains(1) && !C01b02b.Contains(1)) || (!C01b02a.Contains(1) && C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) && ((C01b02a.Contains(2) && !C01b02b.Contains(2)) || (!C01b02a And [1770 other symbols [1]](#)	003 ☐ March (တပေါင်း - နွေ)	
	004 ☐ April (တန်ခူး - နွေ)	
	005 ☐ May (ကဆုန် - နွေ)	
	006 ☐ June (နယုန် - မိုး)	
M1 not equal no services	007 ☐ July (ဝါဆို - မိုး)	
V2 (!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) || (self.Contains(777) && !self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14))	008 ☐ August (ဝါခေါင် - မိုး)	
	009 ☐ September (တော်သလင်း - မိုး)	
M2 if choose none, not choose other	010 ☐ October (သီတင်းကျွတ် - မိုး)	
	011 ☐ November (တန်ဆောင်မုန်း - ဆောင်း)	
	012 ☐ December (နတ်တော် - ဆောင်း)	

777 ☐ None

Ask respondent first about the worst months and then about a typical month for C01b01 to C01b08 If no seasonal changes, ask only about a typical month. Ask questions by ROW. A. WORST MONTHS B. TYPICAL MONTH

C01b03a1. Do you receive information about a "load-shedding" schedule (load shedding is the set hours of electricity available from the grid)? A. WORST MONTHS

E `C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`

SINGLE-SELECT | C01b03a1

01 ◯ Yes
02 ◯ No

C01b03a2. Do you receive information about a "load-shedding" schedule (load shedding is the set hours of electricity available from the grid)? B. TYPICAL MONTH OR OK MONTH

SINGLE-SELECT | C01b03a2

01 ◯ Yes
02 ◯ No

C01b03b1. How many days a week you receive electricity from the grid. A. WORST MONTHS Days per week _____ (Max 7)

E `C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1 `self<=7`
M1 Max 7

NUMERIC: INTEGER | C01b03b1

C01b03b2. How many days a week you receive electricity from the grid. B. TYPICAL MONTH OR OK MONTH Days per week _____ (Max 7)

V1 `self<=7`
M1 Max 7

NUMERIC: INTEGER | C01b03b2

C01b04a. How many hours of electricity are available each day and night from the grid? (max 24 hours) A. WORST MONTHS Hours of supply Don't know............888

E `C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1 `self<=24 || self==888`
M1 Max 24

NUMERIC: DECIMAL | C01b04a

C01b04b. How many hours of electricity are available each day and night from the grid? (max 24 hours) B. TYPICAL MONTH Hours of supply Don't know............888

V1 `self<=24 || self==888`
M1 Max 24
V2 `(C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C01b04a) || self<=24 || self==888`
M2 greather than or equal worst month

NUMERIC: DECIMAL | C01b04b

C01b05a. How many hours of electricity are available each evening, from 6:00 pm to 10:00 pm from the grid? (max 4 hours) A. WORST MONTHS Hours of supply Don't know............888

E `C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1 `self<=4 || self==888`
M1 Max 4

NUMERIC: DECIMAL | C01b05a

C01b05b. How many hours of electricity are available each evening, from 6:00 pm to 10:00 pm from the grid? (max 4 hours) B. TYPICAL MONTH Hours of supply Don't know............888

NUMERIC: DECIMAL | C01b05b

V1	`self<=4 || self==888`	
M1	Max 4	
V2	`(C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self` `>=C01b05a) || self<=4 || self==888`	
M2	greather than or equal worst month	

C01b06a. How many hours of electricity do you use each day and night from the grid? Cannot exceed number of available hours in C01b04. A. WORST MONTHS Hours of supply Don't know…………888

NUMERIC: DECIMAL   C01b06a

- -

E	`C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1	`self<=C01b04a || self==888`
M1	Less than or equal C01b04a

C01b06b. How many hours of electricity do you use each day and night from the grid? Cannot exceed number of available hours in C01b04b B. TYPICAL MONTH Hours of supply Don't know…………888

NUMERIC: DECIMAL   C01b06b

- -

V1	`self<=C01b04b || self==888`
M1	Less than or equal C01b04b
V2	`(C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self` `>=C01b06a) || self<=C01b04b || self==888`
M2	greather than or equal worst month

C01b07a. How many outages/blackouts occur in a week? A. WORST MONTHS Number of outages/blackouts Don't know…………888

NUMERIC: DECIMAL   C01b07a

- -

E	`C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`

C01b07b. How many outages/blackouts occur in a week? B. TYPICAL MONTH Number of outages/blackouts Don't know…………888

NUMERIC: DECIMAL   C01b07b

- -

V1	`(C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self` `>=C01b07a) || self>=0`
M1	greather than or equal worst month

C01b08a1. What is the total duration of all the outages/blackouts in a week? A. WORST MONTHS (Hours) Don't know…………888

NUMERIC: DECIMAL   C01b08a1

- -

E	`C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1	`self<=168 || self==888`
M1	Max 168

C01b08b1. What is the total duration of all the outages/blackouts in a week? B. Typical Months (Hours) Don't know…………888

NUMERIC: DECIMAL   C01b08b1

- -

V1	`self<=168 || self==888`
M1	Max 168
V2	`(C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self` `>=C01b08a1) || self<=168 || self==888`
M2	greather than or equal worst month

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID

C.1.C ALTERNATIVE SOURCE AND COMPLAINT MECHANISM

E	`C01f01.InList(1,2,3)`

C01c01. What is your main back-up source of lighting during outages/blackouts of the grid?

SINGLE-SELECT   C01c01

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
	555 ⭕ Other, specify
	777 ⭕ No back-up source

C01c01Other. Other, Specify

E C01c01==555

TEXT   C01c01Other

···

C01c02. What is your main back-up source of electricity for appliances (including mobile phone charging) during outages/blackouts of the grid?

SINGLE-SELECT   C01c02

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
555 ⭕ Other, specify
777 ⭕ No back-up source

C01c02Other. Other, Specify

E C01c02==555

TEXT   C01c02Other

···

C01c03. How do you request for repairs in electricity service or file a complaint?

SINGLE-SELECT   C01c03

001 ⭕ Call/SMS utility company
002 ⭕ Call a local technician
003 ⭕ Send a letter/email
004 ⭕ Social media
005 ⭕ Talk to community representative
006 ⭕ No system to request repairs/file complaint
007 ⭕ Doing nothing
555 ⭕ Other, specify

C01c03Other. Other, Specify

E C01c03==555

TEXT   C01c03Other

···

C01c04. When there is a blackout in your community, who do you usually approach for assistance?

SINGLE-SELECT   C01c04

01 ⭕ The power company
02 ⭕ Someone not from power company
03 ⭕ No-one: we wait until power returns
04 ⭕ EPC Staff

C01c05. The last time you asked for assistance, how many days after you contacted [C01c04 response] did they come to fix the problem? Enumerator: Response can be given in hours and divided by 24 Number of days

E C01c04!=3

NUMERIC: DECIMAL   C01c05

– –

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID
C.1.D PROBLEMS FACED WITH GRID CONNECTION

E `C01f01.InList(1,2,3)`

C01d01. 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 · C01d01 001 ○ Yes 002 ○ No 888 ○ Don't know
C01d02a. What are the most serious problems you experience with your grid electricity? Record up to 2 responses. a. First	SINGLE-SELECT · C01d02a 001 ○ Supply shortage/not enough hours of electricity 002 ○ Low/high voltage problems or voltage fluctuations 003 ○ Unpredictable interruptions 004 ○ Unexpectedly high bill 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, specify, 777 ○ No problems
C01d02aOther. Other, Specify E `C01d02a==555`	TEXT · C01d02aOther ....
C01d02b. What are the most serious problems you experience with your grid electricity? Record up to 2 responses. b. Second E `C01d02a!=777`	SINGLE-SELECT · C01d02b 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, specify 777 ○ No problems
C01d02bOther. Other, Specify E `C01d02b==555`	TEXT · C01d02bOther ....
C01d03. In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the grid electricity?	SINGLE-SELECT · C01d03 01 ○ Yes 02 ○ No

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID
C.1.E USE OF ELECTRICITY SERVICE FROM GRID

E `C01f01.InList(1,2,3)`

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID / C.1.E USE OF ELECTRICITY SERVICE FROM GRID
Roster: ELECTRICITY USE FROM GRID
generated by multi-select question C1 · C1E_UseElectricityMainGrid

C01e_01. In a typical day how many of the %rostertitle% are used. Write 0 if none	NUMERIC: INTEGER	C01e_01
V1 self<=C2		
M1 Less than or eqyal from total	------------------------------	

C01e_02. What is the total sum of hours used?	NUMERIC: INTEGER	C01e_02
E C01e_01>=1 && (@rowcode==101|| @rowcode==102|| @rowcode==103|| @rowcode==104|| @rowcode==201|| @rowcode==202|| @rowcode==203|| @rowcode==301|| @rowcode==302|| @rowcode==303|| @rowcode==304|| And 239 other symbols [1]	------------------------------	

C.1 GOVT. GRID/ TOWN GRID/ BORDER GRID

C.1.F REASONS FOR NO GOVT. GRID CONNECTION AND EXPECTATIONS

E C01f01.InList(4,5)

C01f02. How far is your house from the nearest national grid line? Km [ ] Do not know... 888	NUMERIC: INTEGER	C01f02

C01f03. What is the MAIN reason why your household is not connected to the grid? Record the MAIN reason.	SINGLE-SELECT	C01f03
	001 ◯ Grid is too far from household/not available	
	002 ◯ Cost of initial network construction too expensive	
	003 ◯ Cost of connection fee is expensive	
	004 ◯ Monthly fee is too expensive	
	005 ◯ Satisfied with current energy solution	
	006 ◯ Renting, Landlord decision	
	007 ◯ Service Unreliable	
	008 ◯ Administrative procedure is too complicated	
	009 ◯ Submitted application and waiting for connection	
	010 ◯ EPC/Township service provider refused to connect the household	
	555 ◯ Other, specify	

C01f03Other. Other, Specify	TEXT	C01f03bOther
E C01f03==555	....	

C01f04. Do you expect to get grid connection?	SINGLE-SELECT	C01f04
	001 ◯ Yes	
	999 ◯ Don't expect to get grid connection	
	888 ◯ Don't know	

C01f05a. What month and year do you expect to get grid connection? Month Don't know...... 888 ALL RESPONSES☐ C.94	SINGLE-SELECT	C01f05a
E C01f04==1 || C01f04==888	01 ◯ January ပထမသို	
V1 self<=12	02 ◯ February တပို့တွဲ	
M1 Max 12	03 ◯ March တပေါင်း	
	04 ◯ April တန်ခူး	
	05 ◯ May ကဆုန်	
	06 ◯ June နယုန်	
	07 ◯ July ဝါဆို	
	08 ◯ August ဝါခေါင်နွ	
	09 ◯ September တော်သလင်း	
	10 ◯ October သီတင်းကျွတ်န	
	11 ◯ November တန်ဆောင်မုန်း	

	12 ◯ December နတ်တော်
C01f05b. What month and year do you expect to get grid connection? Year Don't know……888 ALL RESPONSES◻ C.94 E `C01f04==1 || C01f04==888` V1 `self>=2017` M1 greater than or equal 2017	NUMERIC: INTEGER C01f05b -------------------------------

C.2 USE OF ELECTRICITY SERVICE FROM MINI GRID

C02a01. Is the household connected to a mini-grid?	SINGLE-SELECT C02a01 01 ◯ Yes 02 ◯ No

C.2 USE OF ELECTRICITY SERVICE FROM MINI GRID
C.2.A CONNECTION
E `C02a01==1`

C02a02. Is there a limit for the load and/or appliances you are allowed to power from this mini-grid?	SINGLE-SELECT C02a02 001 ◯ Yes 002 ◯ No 888 ◯ Don't Know
C02a10. Who own and operate mini-grid?	SINGLE-SELECT C02a10 001 ◯ Private company or person 002 ◯ Community organization 003 ◯ Village electrification committee 555 ◯ Others, specify
C02a10Other. Others, specify E `C02a10==555`	TEXT C02a10Other ....
C02a03. What is the name of the local mini-grid company?	TEXT C02a03 ....
C02a04. How many years have you had this mini-grid connection? Record in years, if less than 1 year record 1	NUMERIC: INTEGER C02a04 -------------------------------
C02a05. How much did your house pay for the mini-grid connection fee? Refer to connection cost ONLY. Local currency Don't know …………………………….888 Enter 0 for no connection	NUMERIC: INTEGER C02a05 -------------------------------
C02a06. How much did your house pay for the internal wiring? Do not include the connection fee from C.91 here Local currency Don't know …………………….888	NUMERIC: INTEGER C02a06 -------------------------------
C02a07. How many weeks after you applied for the mini-grid connection did your house get connected? (Insert 0 if immediate) Number of weeks	NUMERIC: INTEGER C02a07 -------------------------------

C02a08. How many weeks after you were connected were you able to use electricity in your home? (Insert 0 if immediate) Number of weeks	NUMERIC: INTEGER C02a08 -------------------------------------
C02a09. Have you applied for an upgrade of service since you connected to the mini-grid?	SINGLE-SELECT C02a09 01 ○ Yes 02 ○ No
C02a11. Does your house have an electric meter?	SINGLE-SELECT C02a11 01 ○ Yes 02 ○ No
C02a12. Does your house share the electric meter? E C02a11==1	SINGLE-SELECT C02a12 01 ○ Yes 02 ○ No
C02a13. How many house are sharing the meter? umber of Households ALL☐C.109 E C02a12==1	NUMERIC: INTEGER C02a13 -------------------------------------
C02a14. How are you billed for electricity? Read options aloud	SINGLE-SELECT C02a14 001 ○ Pay by unit as indicated by the meter 002 ○ Utility estimate consumption 003 ○ Fixed fee 004 ○ Pay by number of lights and appliances 005 ○ No bill for eclectricity or do not have to pay Other, specify 555 ○ Other, specify
C02a14Other. Other(Specify) E C02a14==555	TEXT C02a14Other ....
C02a15. What is the most common way you make your electricity bill payment?	SINGLE-SELECT C02a15 001 ○ Pay to Mini grid owner or operator 002 ○ Credits using mobile money (owner and operator) 003 ○ Pay to Relative /Neighbor 004 ○ Pay to Landlord 005 ○ Pay no one, do not pay 555 ○ Other, specify
C02a15Other. Other(Specify) E C02a15==555	TEXT C02a15Other ....
C02a16. Were you involved in setting the tariff for the mini-grid?	SINGLE-SELECT C02a16 01 ○ Yes 02 ○ No
C02a17. How were you involved in the tariff setting? E C02a16==1	SINGLE-SELECT C02a17 001 ○ Community meeting 002 ○ Contacted by mini-grid company 003 ○ Member of electricity committee 004 ○ Member of cooperative 555 ○ Other, specify

C02a17Other. Others, specify	TEXT	C02a17Other
E C02a17==555	....	

C02a18. Enumerator: If the respondent pays the energy company or has a record of the electricity payment, ask to see the electricity bill/invoice and use it for 0 and 0.	SINGLE-SELECT C02a18 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

C02a19. In the last month, how much did you spend on the electric bill? Calculate amount paid from the last bill. Local Currency Don't Know...888	NUMERIC: INTEGER C02a19 _

C02a20. In the last month how much electricity did your house use? Calculate the consumption from the last bill. Quantity in Kilowatt Hour (kWh) Don't Know...888	NUMERIC: INTEGER C02a20 _

C.2 USE OF ELECTRICITY SERVICE FROM MINI GRID

C.2.B AVALIBALITY/ RELIABILITY AND QAULITY OF SERVICE

E C02a01==1

C02b01. Is the quality of electricity service the same all year?	SINGLE-SELECT C02b01 01 ◯ Yes 02 ◯ No

C02b02a. In the last 12 months, (start from this month) which months have no electric service. (Multiple response) V1 (!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)) || (self.Contains(777) && !self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)) M1 if choose none, not choose other	MULTI-SELECT C02b02a 001 ☐ January (ပြာသို - ဆောင်း) 002 ☐ February (တပို့တွဲ - ဆောင်း) 003 ☐ March (တပေါင်း - နွေ) 004 ☐ April (တန်ခူး - နွေ) 005 ☐ May (ကဆုန် - နွေ) 006 ☐ June (နယုန် - မိုး) 007 ☐ July (ဝါဆို - မိုး) 008 ☐ August (ဝါခေါင် - မိုး) 009 ☐ September (တော်သလင်း - မိုး) 010 ☐ October (သီတင်းကျွတ် - မိုး) 011 ☐ November (တန်ဆောင်မုန်း - ဆောင်း) 012 ☐ December (နတ်တော် - ဆောင်း) 777 ☐ None

C02b02b. In the last 12 months, (start from this month) which months have the worst electric service. (Multiple response) V1 ((C02b02a.Contains(1) && !C02b02b.Contains(1)) || (!C02b02a.Contains(1) && C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) && ((C02b02a.Contains(2) && !C02b02b.Contains(2)) || (!C02b02a And [1770 other symbols \[2\]](#) M1 not equal no services V2 (!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) || (self.Contains(777) && !self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) M2 if choose none, not choose other	MULTI-SELECT C02b02b 001 ☐ January (ပြာသို - ဆောင်း) 002 ☐ February (တပို့တွဲ - ဆောင်း) 003 ☐ March (တပေါင်း - နွေ) 004 ☐ April (တန်ခူး - နွေ) 005 ☐ May (ကဆုန် - နွေ) 006 ☐ June (နယုန် - မိုး) 007 ☐ July (ဝါဆို - မိုး) 008 ☐ August (ဝါခေါင် - မိုး) 009 ☐ September (တော်သလင်း - မိုး) 010 ☐ October (သီတင်းကျွတ် - မိုး) 011 ☐ November (တန်ဆောင်မုန်း - ဆောင်း) 012 ☐ December (နတ်တော် - ဆောင်း)

777 ☐ None

Ask respondent first about the worst months and then about a typical month for C.117- C.122 If no seasonal changes, ask only about a typical month. Ask questions by ROW. A. WORST MONTHS B. TYPICAL MONTH

C02b03a1. Do you receive information about a "load-shedding" schedule (load shedding is the set hours of electricity available from the mini grid)? A. WORST MONTHS	SINGLE-SELECT C02b03a1 01 ◯ Yes 02 ◯ No

E `C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`

C02b03a2. Do you receive information about a "load-shedding" schedule (load shedding is the set hours of electricity available from the mini grid)? B. TYPICAL OR OK MONTH	SINGLE-SELECT C02b03a2 01 ◯ Yes 02 ◯ No

C02b03b1. How many days a week you receive electricity from the mini grid. A. WORST MONTHS Days per week _____ (Max 7)	NUMERIC: INTEGER C02b03b1 ------------------------------------

E `C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1 `self<=7`
M1 Max 7

C02b03b2. How many days a week you receive electricity from the mini grid. B. TYPICAL OR OK MONTH Days per week _____ (Max 7)	NUMERIC: INTEGER C02b03b2 ------------------------------------

V1 `self<=7`
M1 Max 7
V2 `(C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C02b03b1) || self<=7`
M2 greather than or equal worst month

C02b04a. How many hours of electricity are available each day and night from the mini-grid? (max 24 hours) A. WORST MONTHS Hours of supply Don't know............888	NUMERIC: DECIMAL C02b04a ------------------------------------

E `C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1 `self<=24 || self==888`
M1 Max 24

C02b04b. How many hours of electricity are available each day and night from the mini-grid? (max 24 hours) B. TYPICAL MONTH Hours of supply Don't know............888	NUMERIC: DECIMAL C02b04b ------------------------------------

V1 `self<=24 || self==888`
M1 Max 24
V2 `(C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C02b04a) || self<=24 || self==888`
M2 greather than or equal worst month

C02b05a. How many hours of electricity are available each evening, from 6:00 pm to 10:00 pm from the mini-grid? (max 4 hours) A. WORST MONTHS Hours of supply Don't know............888	NUMERIC: DECIMAL C02b05a ------------------------------------

E `C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1 `self<=4 || self==888`
M1 Max 4

C02b05b. How many hours of electricity are available each evening, from 6:00 pm to 10:00	NUMERIC: DECIMAL C02b05b ------------------------------------

pm from the mini-grid? (max 4 hours) B.
TYPICAL MONTH Hours of supply Don't
know…………888

V1 `self<=4 || self==888`
M1 Max 4
V2 `(C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C02b05a) || self<=4 || self==888`
M2 greather than or equal worst month

C02b06a. How many hours of electricity do you
use each day from the mini-grid? Cannot
exceed number of available hours in C.111 A.
WORST MONTHS Hours of supply Don't
know…………888

NUMERIC: DECIMAL   C02b06a

E `C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1 `self<=C02b04a || self==888`
M1 Less than or equal C118a

C02b06b. How many hours of electricity do you
use each day from the mini-grid? Cannot
exceed number of available hours in C.111 B.
TYPICAL MONTH Hours of supply Don't
know…………888

NUMERIC: DECIMAL   C02b06b

V1 `self<=C02b04b || self==888`
M1 Less than or equal C118b
V2 `(C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C02b06a) || self<=C02b04b || self==888`
M2 greather than or equal worst month

C02b07a. How many outages/blackouts occur
in a week? A. WORST MONTHS Number of
outages/blackouts Don't know…………888

NUMERIC: DECIMAL   C02b07a

E `C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`

C02b07b. How many outages/blackouts occur
in a week? B. TYPICAL MONTH Number of
outages/blackouts Don't know…………888

NUMERIC: DECIMAL   C02b07b

V1 `(C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self <=C02b07a) || self>=0`
M1 greather than or equal worst month

C02b08a1. What is the total duration of all the
outages/blackouts in a week? A. WORST
MONTHS a. Hours Don't know…………888

NUMERIC: DECIMAL   C02b08a1

E `C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)`
V1 `self<=168 || self==888`
M1 Max 168

C02b08b1. What is the total duration of all the
outages/blackouts in a week? A. Typical
MONTHS a. Hours Don't know…………888

NUMERIC: DECIMAL   C02b08b1

V1 `self<=168 || self==888`
M1 Max 168
V2 `(C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C02b08a1) || self<=168 || self==888`
M2 greather than or equal worst month

C.2 USE OF ELECTRICITY SERVICE FROM MINI GRID
C.2.C ALTERNATIVE SOURCE AND COMPLAINT MECHANISM

E `C02a01==1`

C02c01. What is your main back-up source of lighting during outages/blackouts of the grid?	SINGLE-SELECT	C02c01
	001 ⚪ National grid	
	002 ⚪ Border/Thai grid	
	003 ⚪ Township own grid	
	004 ⚪ Electric generator	
	005 ⚪ Rechargeable battery and storage devices (e.g.: car battery)	
	006 ⚪ Solar home system	
	007 ⚪ Solar Lantern/ solar lighting system	
	008 ⚪ Pico-hydro	
	009 ⚪ Kerosene lamp	
	010 ⚪ Fuel-based lighting	
	011 ⚪ Dry-cell (non-rechargeable) battery/ Torch/ Flashlight	
	012 ⚪ Candle	
	555 ⚪ Other, specify	
	777 ⚪ No back-up source	

C02c01Other. Others, specify	TEXT	C02c01Other
E C02c01==555	....	

C02c02. What is your main back-up source of electricity for appliances during outages/blackouts of the mini-grid?	SINGLE-SELECT	C02c02
E C02c01!=111	001 ⚪ Electric generator	
	002 ⚪ Rechargeable battery and storage devices (e.g.: car battery)	
	003 ⚪ Solar Home System	
	004 ⚪ Solar Lantern/Lighting system	
	005 ⚪ Pico-hydro	
	555 ⚪ Other, specify	
	777 ⚪ No back-up source	

C02C02Other. Others, specify	TEXT	C02C02Other
E C02c02==555	....	

C02c03. How do you request for repairs in electricity service or file a complaint?	SINGLE-SELECT	C02c03
	001 ⚪ Call/SMS mini-grid operator	
	002 ⚪ Call a local technician	
	003 ⚪ Send a letter/email	
	004 ⚪ Social media	
	005 ⚪ Talk to community representative	
	006 ⚪ No system to request repairs/file complaint	
	555 ⚪ Other, specify	

C02c03Other. Others, specify	TEXT	C02c03Other
E C02c03==555	....	

C02c04. When there is a blackout in your community, who do you usually approach for assistance?	SINGLE-SELECT	C02c04
	01 ⚪ The power company	
	02 ⚪ Someone not from power company	
	03 ⚪ No-one: we wait until power returns	

C02c05. TThe last time you asked for assistance, how many days after you contacted [C02c04 response] did they come to fix the problem? Number of days Don't know..888	NUMERIC: DECIMAL	C02c05
	– – – – – – – – – – – – – – – – – –	

C.2 USE OF ELECTRICITY SERVICE FROM MINI GRID
C.2.D PROBLEMS FACED WITH MINI GRID CONNECTION

E   C02a01==1

C02d01. In the last 12 months, did any of your appliances get damaged because the voltage was going up and down from the mini grid?	SINGLE-SELECT C02d01 001 ◯ Yes 002 ◯ No 888 ◯ Don't know
C02d02a. What are the most serious problems you experience with your mini grid electricity? Record up to 2 responses. a. First	SINGLE-SELECT C02d02a 001 ◯ Supply shortage/not enough hours of electricity 002 ◯ Low/high voltage problems or voltage fluctuations 003 ◯ Unpredictable interruptions 004 ◯ Unexpectedly high bills 005 ◯ Too expensive 006 ◯ Do not trust the supplier 007 ◯ Cannot power large appliances 008 ◯ Maintenance/service problems 009 ◯ Unpredictable bills 555 ◯ Other, specify 777 ◯ No problems
C02d02aOther. Others, specify E C02d02a==555	TEXT C02d02aOther ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄
C02d02b. What are the most serious problems you experience with your grid electricity? Record up to 2 responses. b. Second E C02d02a!=111	SINGLE-SELECT C02d02b 001 ◯ Supply shortage/not enough hours of electricity 002 ◯ Low/high voltage problems or voltage fluctuations 003 ◯ Unpredictable interruptions 004 ◯ Unexpectedly high bills 005 ◯ Too expensive 006 ◯ Do not trust the supplier 007 ◯ Cannot power large appliances 008 ◯ Maintenance/service problems 009 ◯ Unpredictable bills 555 ◯ Other, specify 111 ◯ No problems
Others, specify E C02d02b==555	TEXT C02d02b_Other ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄
C02d03. In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the mini grid electricity?	SINGLE-SELECT C02d03 01 ◯ Yes 02 ◯ No

C.2 USE OF ELECTRICITY SERVICE FROM MINI GRID
C.2.E USE OF ELECTRICITY SERVICE FROM MINI GRID

E   C02a01==1

C.2 USE OF ELECTRICITY SERVICE FROM MINI GRID / C.2.E USE OF ELECTRICITY SERVICE FROM MINI GRID
Roster: ELECTRICITY USE FROM MINI GRID

C02e_01. In a typical day how many of the %rostertitle% are used. Write 0 if none	NUMERIC: INTEGER C02e_01
V1 self<=C2 M1 Less than or equal total	

C02e_02. What is the total sum of hours used?	NUMERIC: INTEGER C02e_02
E C02e_01>=1 && (@rowcode==101|| @rowcode==102|| @rowcode= =103|| @rowcode==104|| @rowcode==201|| @rowcode==202|| @ rowcode==203|| @rowcode==301|| @rowcode==302|| @rowcode= =303|| @rowcode==304|| And 239 other symbols [2]	

C.3 USE OF ELECTRICITY FROM ELECTRIC GENERATOR SET

C03a01. In the last 12 months, did the household use a generator to supply electricity?	SINGLE-SELECT C03a01 01 ◯ Yes 02 ◯ No

C03a02. If yes,do you use it for back up for the main grid?	SINGLE-SELECT C03a02 001 ◯ Yes 002 ◯ No 888 ◯ Don't know
E C03a01==1 && C01f01.InList(1,2,3,4) V1 self!=1 || (self==1 && (C01f01==2 || C01f01==1 || C01f01 ==3 || C01f01 ==4)) M1 Check backup source from main grid	

C.3 USE OF ELECTRICITY FROM ELECTRIC GENERATOR SET
C.3.A USAGE

E   C03a01==1

C03a03. Do you share this generator with other house?	SINGLE-SELECT C03a03 01 ◯ Yes 02 ◯ No

C03a04. How many house are sharing electricity from this generator? Number of house Don't know…...........................888	NUMERIC: INTEGER C03a04
E C03a03==1	

C03a05. Enumerator Observation: What is the capacity of the generator? Read name plate of the generator. Volt Amps (kVA) Don't know…..888	NUMERIC: DECIMAL C03a05

C03a06. In the last 12 months, in which months did you use this generator or did you use it all year? Multiple responses possible	MULTI-SELECT C03a06 01 ☐ January (ပြာသို - ဆောင်း) 02 ☐ February (တပို့တွဲ - ဆောင်း) 03 ☐ March (တပေါင်း - နွေ) 04 ☐ April (တန်ခူး - နွေ) 05 ☐ May (ကဆုန် - နွေ) 06 ☐ June (နယုန် - မိုး) 07 ☐ July (ဝါဆို - မိုး) 08 ☐ August (ဝါခေါင် - မိုး) 09 ☐ September (တော်သလင်း - မိုး) 10 ☐ October (သီတင်းကျွတ် - မိုး) 11 ☐ November (တန်ဆောင်မုန်း - ဆောင်း)

	12 ☐ December (နတ်တော် - ဆောင်း)
	13 ☐ All year round

C03a07a. How many days per month did you typically use this generator? Number of days Don't know 888	NUMERIC: INTEGER C03a07a
V1 `self<=30` M1 Max 30	

C03a07b. How many hours per day do you use the generator?	NUMERIC: INTEGER C03a07b
V1 `self<=24` M1 Max 24	

C03a08. In the last 12 months, what did your house use this generator for? Multiple responses possible	MULTI-SELECT C03a08 001 ☐ Lighting 002 ☐ Appliances 003 ☐ Home-based income activity 555 ☐ Other, specify 888 ☐ Don't know

C03a08Other. Other, Specify	TEXT C03a08Other
E `C03a08.Contains(555)`	

C03a09. How many years have you used this generator? Record in years, if less than 1 year record 1 Number of Years Don't know……………………………………….888	NUMERIC: INTEGER C03a09

C.3 USE OF ELECTRICITY FROM ELECTRIC GENERATOR SET
C.3.B OWN OR RENT

E `C03a01==1`

C03b01. Does your household own the generator?	SINGLE-SELECT C03b01 01 ○ Yes 02 ○ No

C03b02. Who owns the generator?	SINGLE-SELECT C03b02 001 ○ Other Household 002 ○ Community organization 003 ○ Private person/entity 555 ○ Other, specify 888 ○ Don't know
E `C03b01==2`	

C03b02Other. Other, Specify	TEXT C03b02Other
E `C03b02==555`	

C03b03. Do you rent the generator or use it for free?	SINGLE-SELECT C03b03 01 ○ Rent 02 ○ Use for free
E `C03b01==2`	

C03b04. How do you pay for electricity services from the generator?	SINGLE-SELECT C03b04 001 ○ Fixed payment (per month or week) 002 ○ Charge by number of lights/appliances 003 ○ Charge per kWh 004 ○ Pay for fuel only
E `C03b01==2`	

	005 ◯ No need to pay
	555 ◯ Other, specify

C03b04Other. Other, Specify	TEXT	C03b04Other
E C03b04==555	....	

C03b05. In the months that you use it, how much did you pay to use the generator each month? Do not include any cost of fuel, only fee for using the GENERATOR. Local currency Don't know...............................888 ALL☐C.204	NUMERIC: INTEGER	C03b05
E C03b03==1 && C03b04!=4		

C03b06. How much did you pay to purchase the generator? Local currency Don't know...............................888 ALL☐C.204	NUMERIC: INTEGER	C03b06
E C03b01==1		

C03b07. In the last 12 months, how much did you pay for repairs/parts/maintenance of the generator? Local currency Don't know...............................888 ALL☐C.204	NUMERIC: INTEGER	C03b07

C03b08. What fuel is used to power the generator?	SINGLE-SELECT	C03b08
	001 ◯ Diesel	
	002 ◯ Gasoline	
	555 ◯ Other, specify	
	888 ◯ Don't know	

C03b08Other. Other, Specify	TEXT	C03b08Other
E C03b08==555	....	

C03b09a. In the month that you use, what was the total quantity of fuel used to power the generator? a. Amount |__|__|__| Don't know...............................888	NUMERIC: DECIMAL	C03b09a

C03b09b. In the month that you use, what was the total quantity of fuel used to power the generator? b. Unit	SINGLE-SELECT	C03b09b
	001 ◯ Liters	
	002 ◯ Gallons	
E C03b09a>0 || C03b09a!=888	888 ◯ Don't know	

C03b10. Do you pay for the fuel used to power the generator?	SINGLE-SELECT	C03b10
	01 ◯ Yes	
	02 ◯ No	

C03b11. In the month that you use how much did your household spend on fuel for this generator? Local currency Don't know...............................888	NUMERIC: INTEGER	C03b11
E C03b10==1		

C03b12. Is the generator the household's main source of electricity?	SINGLE-SELECT	C03b12
	01 ◯ Yes	
	02 ◯ No	

C.3 USE OF ELECTRICITY FROM ELECTRIC GENERATOR SET
C.3.C FUEL FOR GENERATOR

E C03a01==1

C03c01. Are there certain months/seasons of the year when less fuel is available to power the generator?	SINGLE-SELECT	C03c01
	01 ◯ Yes	
	02 ◯ No	

C03c02. What are the worst months of fuel availability for the generator? Multiple responses are possible.

E C03c01==1
V1 (!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13)) || (self.Contains(777) && !self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13))
M1 if choose none, not choose other

MULTI-SELECT   C03c02

001 ☐ January (ပြာသို - ဆောင်း)
002 ☐ February (တပို့တွဲ - ဆောင်း)
003 ☐ March (တပေါင်း - နွေ)
004 ☐ April (တန်ခူး - နွေ)
005 ☐ May (ကဆုန် - နွေ)
006 ☐ June (နယုန် - မိုး)
007 ☐ July (ဝါဆို - မိုး)
008 ☐ August (ဝါခေါင် - မိုး)
009 ☐ September (တော်သလင်း - မိုး)
010 ☐ October (သီတင်းကျွတ် - မိုး)
011 ☐ November (တန်ဆောင်မုန်း - ဆောင်း)
012 ☐ December (နတ်တော် - ဆောင်း)
013 ☐ Used all year
777 ☐ None

STATIC TEXT

Ask respondent first about the worst months and then about a typical month for C.211-C.213 If no seasonal changes (C.209) or not the main source (C.208) ask only about a typical month. Ask questions by ROW. A. WORST MONTHS B. TYPICAL MONTH

C03c03a. How many hours could you use this generator each day and night if you wanted to? (max 24 hours) A. WORST MONTHS Hours of supply Don't know…………888

E C03c02.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13)
V1 self<=24 || self==888
M1 Max 24

NUMERIC: DECIMAL   C03c03a

C03c03b. How many hours could you use this generator each day and night if you wanted to? (max 24 hours) B. TYPICAL MONTH Hours of supply Don't know…………888

V1 self<=24 || self==888
M1 Max 24
V2 (C03c02.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13) && self>=C03c03a) || self<=24 || self==888
M2 greather than or equal worst month

NUMERIC: DECIMAL   C03c03b

C03c04a. How many hours could you use this generator each evening, from 6:00 pm to 10:00 pm if you wanted to? (max 4 hours) A. WORST MONTHS Hours of supply Don't know…………888

E C03c02.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13)
V1 self<=4 || self==888
M1 Max 4

NUMERIC: DECIMAL   C03c04a

C03c04b. How many hours could you use this generator each evening, from 6:00 pm to 10:00 pm if you wanted to? (max 4 hours) B. TYPICAL MONTH Hours of supply Don't know…………888

V1 self<=4 || self==888
M1 Max 4
V2 (C03c02.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13) && self>=C03c04a) || self<=4 || self==888

NUMERIC: DECIMAL   C03c04b

M2	greather than or equal worst month

C03c05a. How many hours do you actually use this generator each day? (Cannot be more than C03c03) A. WORST MONTHS Hours of supply Don't know…………888	NUMERIC: DECIMAL C03c05a - .

E `C03c02.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13)`
V1 `self<=C03c03a || self==888`
M1 Less than or equal C03c03a

C03c05b. How many hours do you actually use this generator each day? (Cannot be more than C03c03) B. TYPICAL MONTH Hours of supply Don't know…………888	NUMERIC: DECIMAL C03c05b - .

V1 `self<=C03c03b || self==888`
M1 Less than or equal C03c03b
V2 `(C03c02.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13) && self>=C03c05a) || self<=C03c03b || self==888`
M2 greather than or equal worst month

C.3 USE OF ELECTRICITY FROM ELECTRIC GENERATOR SET
C.3.D PROBLEMS FACED WITH GENERATOR

E `C03a01==1`

C03d01. 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 C03d01 001 ◯ Yes 002 ◯ No 888 ◯ Don't know

C03d02a. What are the most serious problems you experience with the generator? Record up to 2 responses. a. First	SINGLE-SELECT C03d02a 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 008 ◯ Electricity generated from gen set damages appliances 555 ◯ Other, specify 777 ◯ No problems

C03d02aOther. Other, Specify	TEXT C03d02aOther

E `C03d02a==555`

C03d02b. What are the most serious problems you experience with the generator? Record up to 2 responses. b. Second E `C03d02a!=111`	SINGLE-SELECT C03d02b 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 008 ◯ Electricity generated from gen set damages appliances 555 ◯ Other, specify 777 ◯ No problems

C03d02bOther. Other, Specify	TEXT	C03d02bOther
E C03d02b==555	....	

C03d03. In the last 12 months, did any household members die or have permanent limb (bodily injury) damage because of the generator?	SINGLE-SELECT	C03d03
	001 ◯ Yes 002 ◯ No 888 ◯ Don't know	

C.3 USE OF ELECTRICITY FROM ELECTRIC GENERATOR SET
C.3.E USE OF ELECTRICITY SERVICE FROM GENERATOR SET
E C03a01==1

C.3 USE OF ELECTRICITY FROM ELECTRIC GENERATOR SET / C.3.E USE OF ELECTRICITY SERVICE FROM GENERATOR SET
Roster: ELECTRICITY USE FROM GENERATOR SET
generated by multi-select question C1   C3E_UseElectricityGenSet

C03e_01. In a typical day how many of the %rostertitle% are used. Write 0 if none	NUMERIC: INTEGER	C03e_01
V1 self<=C2 M1 Less than or equal total	------------------------------.	

C03e_02. What is the total sum of hours used?	NUMERIC: INTEGER	C03e_02
E C03e_01>=1 && (@rowcode==101|| @rowcode==102|| @rowcode==103|| @rowcode==104|| @rowcode==201|| @rowcode==202|| @rowcode==203|| @rowcode==301|| @rowcode==302|| @rowcode==303|| @rowcode==304|| And 239 other symbols [3]	------------------------------.	

C.4 USE OF EXTERNALLY RECHARGED BATTERY

STATIC TEXT

Externally Recharged Battery (Car Battery) Instruction: Not include battery which is part of solar home system.

C04a01. In the last 12 months, did the household use any rechargeable batteries, such as car batteries, for electricity?	SINGLE-SELECT	C04a01
	01 ◯ Yes 02 ◯ No	

C04a03. Do you use it for back up for the main or mini grid?	SINGLE-SELECT	C04a03
E C04a01==1 && C01f01.InList(1,2,3,4)	01 ◯ Yes 02 ◯ No	

C.4 USE OF EXTERNALLY RECHARGED BATTERY
C.4.A USAGE
E C04a01==1

C04a02. Did the household use invrter with that battery?	SINGLE-SELECT	C04a02
	01 ◯ Yes 02 ◯ No	

C04a04. In the last 12 months, in which months did you use rechargeable batteries or did you use it all year? Multiple responses possible	MULTI-SELECT	C04a04
	01 ☐ January (ပြာသို - ဆောင်း) 02 ☐ February (တပို့တွဲ - ဆောင်း) 03 ☐ March (တပေါင်း - နွေ) 04 ☐ April (တန်ခူး - နွေ)	

	05 ☐ May (ကဆုန် - နွေ)
	06 ☐ June (နယုန် - မိုး)
	07 ☐ July (ဝါဆို - မိုး)
	08 ☐ August (ဝါခေါင် - မိုး)
	09 ☐ September (တော်သလင်း - မိုး)
	10 ☐ October (သီတင်းကျွတ် - မိုး)
	11 ☐ November (တန်ဆောင်မုန်း - ဆောင်း)
	12 ☐ December (နတ်တော် - ဆောင်း)
	13 ☐ Used all year

C04a05. In the last 12 months, what did your household use rechargeable batteries for? Multiple responses possible	MULTI-SELECT C04a05
	001 ☐ Lighting
	002 ☐ Appliances
	003 ☐ Home-based income activity
	555 ☐ Other, specify

C04a05Other. Other, Specify	TEXT C04a05Other
E `C04a05.Contains(555)`	··

C04a06. What is the total number of rechargeable batteries that you use in a typical month? Don't know……………………………………888	NUMERIC: INTEGER C04a06
V1 `self>0`	- ·
M1 Cannot be 0	

C.4 USE OF EXTERNALLY RECHARGED BATTERY
C.4.B BATTERY SPEC AND RECHARGING

E `C04a01==1`

C.4 USE OF EXTERNALLY RECHARGED BATTERY / C.4.B BATTERY SPEC AND RECHARGING
Roster: C4B. ASK FOR EACH BATTERY USING REGULARLY
generated by numeric question C04a06   C4B_BatterySpecRecharge

E `C04a06>0`

C04b01. Bought new or used	SINGLE-SELECT C04b01
	01 ○ New
	02 ○ Used

C04b02. Capacity _____Amp-Hrs	NUMERIC: INTEGER C04b02
	- ·

C04b03. Voltage _____Volts	NUMERIC: INTEGER C04b03
	- ·

C04b04. Cost of battery _____Kyats	NUMERIC: INTEGER C04b04
	- ·

C04b05. Number of recharge per month _____Volts	NUMERIC: INTEGER C04b05
	- ·

C04b06. Cost per recharge _____Kyats	NUMERIC: INTEGER C04b06
	- ·

C04b07. What is the average monthly expenditure on recharging batteries in a typical month? _____ Kyats per month	NUMERIC: INTEGER C04b07
	- ·

C04b08. What is the electricity source used to recharge the battery? Single response	SINGLE-SELECT	C04b08

I Instruction: Not include battery which is part of solar home system.

SINGLE-SELECT C04b08

- 001 ◯ National grid
- 002 ◯ Border or Thai grid
- 003 ◯ Township own grid
- 004 ◯ Minigrid connection
- 005 ◯ Electric generator
- 006 ◯ Solar or Solar battery charging station (Not same as solar home system)
- 555 ◯ Other, specify

C04b08Other. Other, Specify

TEXT C04b08Other

E C04b08==555

⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯

C04b09. Is battery recharging limited by availability of electricity from [SOURCE FROM C04b08]

SINGLE-SELECT C04b09

- 001 ◯ Yes
- 002 ◯ No
- 888 ◯ Don't know

C04b10. How many hours can you use rechargeable batteries for electricity supply each day when fully charged if you wanted to? _____ Hours per day

NUMERIC: INTEGER C04b10

I Instruction: If cannot provide answer, ask if the battery is new, how many hours can it be used?

V1 self<=24

M1 Max 24

C04b11. How many hours do you actually use rechargeable batteries for electricity supply each day? _____ Hours per day

NUMERIC: INTEGER C04b11

I Instruction: If cannot provide answer, ask if the battery is old, how many hours can it be used?

V1 self<=C04b10

M1 Less than or equal C04b10

C.4 USE OF EXTERNALLY RECHARGED BATTERY

C.4.C PROBLEMS WITH BATTERIES

E C04a01==1

C04c01a. What are the most serious problems you experience with the rechargeable batteries? Record up to 2 responses. a. First

SINGLE-SELECT C04c01a

- 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, specify
- 777 ◯ No problems

C04c01aOther. Other, Specify

TEXT C04c01aOther

E C04c01a==555

⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯

C04c01b. What are the most serious problems you experience with the rechargeable batteries? Record up to 2 responses. b. Second

SINGLE-SELECT C04c01b

- 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, specify
777	○	No problems

C04c01bOther. Other, Specify

E C04c01b==555

TEXT   C04c01bOther

....

C04c02. How many months did your previous battery last? If don't known ..888

NUMERIC: INTEGER   C04c02

- -

C.4 USE OF EXTERNALLY RECHARGED BATTERY
C.4.D USE OF ELECTRICITY SERVICE FROM RECHARGABLE BATTERY

E C04a01==1

C.4 USE OF EXTERNALLY RECHARGED BATTERY / C.4.D USE OF ELECTRICITY SERVICE FROM RECHARGABLE BATTERY
Roster: ELECTRICITY USE FROM RECHARGABLE BATTERY
generated by multi-select question C1   C4D_UseElectricityRechBattery

---

C04d_01. In a typical day how many of the %rostertitle% are used. Write 0 if none

NUMERIC: INTEGER   C04d_01

- -

E @rowcode==101|| @rowcode==102|| @rowcode==103|| @rowcode
==104|| @rowcode==201|| @rowcode==202|| @rowcode==203||
@rowcode=301|| @rowcode==302|| @rowcode==303|| @rowcode
==304|| @rowcode==305 And 357 other symbols [4]

V1 self<=C2

M1 Less than or equal total

C04d_02. What is the total sum of hours used?

NUMERIC: INTEGER   C04d_02

- -

E C04d_01>=1 && (@rowcode==101|| @rowcode==102|| @rowcode=
=103|| @rowcode==104|| @rowcode==201|| @rowcode==202|| @
rowcode==203|| @rowcode==301|| @rowcode==302|| @rowcode=
=303|| @rowcode==304|| And 239 other symbols [5]

C.5 SOLAR BASED DEVICES

C.5 SOLAR BASED DEVICES
C.5.A ABOUT SOLAR DEVICES AT HOME

C05a01. Interviewer/CAPI check: In the last 12 months, did the household use any of the following solar based devices? Multiple responses possible.

MULTI-SELECT   C05a01

01	☐	Solar home system
02	☐	Solar lighting system
03	☐	Solar lanterns
04	☐	None

C05a02. How many solar home systems (SHS) do you have? Number of solar home systems. If none write 0 .

NUMERIC: INTEGER   C05a02

- -

C05a03. How many solar lighting systems do you have? Number of solar lighting system. If none write 0 .

NUMERIC: INTEGER   C05a03

- -

C05a04. How many solar lanterns do you have? Number of solar lanterns If none write 0 .	NUMERIC: INTEGER	C05a04

TotalSolarSystem. All types of Total Solar System	NUMERIC: INTEGER	TotalSolarSystem
V1 `self==(C05a02+C05a03+C05a04)` M1 Equal sum	--------------------------------	

STATIC TEXT

Ask about all devices in order of importance (Example: Main Solar System is Device 1)

C.5 SOLAR BASED DEVICES / C.5.A ABOUT SOLAR DEVICES AT HOME
Roster: SOLAR DEVICES AT HOME
generated by numeric question `TotalSolarSystem`   C5A_SolarDevices

C05a05. PPlease show me the [DEVICE] Use photo aid and record the code for the photo that best matches the solar device I (Instruction: Check the solar device and record type of solar system)	SINGLE-SELECT 01 ◯ Solar Lantern 02 ◯ Solar Lighting System 03 ◯ Solar home System	C05a05
C05a06a. What is the manufacturer and model of the [DEVICE]? How about if we asking made only? Too hard. How about scanning barcode? a. Name of manufacture b. Model	TEXT	C05a06a
	·································	
C05a06b. Where did you purchase [DEVICE]?	SINGLE-SELECT 01 ◯ In this village 02 ◯ In other village 03 ◯ In this town 04 ◯ In other town 05 ◯ Don't known	C05a06b
C05a08. How many light bulbs are there (that can be separated from each other)? NUMBER OF LIGHT BULBS E `C05a05.InList(2,3)`	NUMERIC: INTEGER	C05a08

C05a08a. Does [ITEM/Solar product] have mobile charging feature?	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	C05a08a
C05a08b. Does [ITEM/Solar Product] have radio feature?	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	C05a08b
C05a09. What is the power rating of the solar panel? Read the name plate of the solar panel QUANT. in Watt-Peak (Wp) If unknown, enter "888" E `C05a05.InList(2,3)`	NUMERIC: INTEGER	C05a09

C05a10. What is the estimated size of the solar panel? E `C05a05.InList(2,3)`	SINGLE-SELECT 001 ◯ 8" x8" or smaller 002 ◯ 16" x 16" 003 ◯ 20" x 40" 004 ◯ 26" x 60" or larger 555 ◯ Other, specify (in width and length)	C05a10

C05a10Other. Other(Specify)	TEXT	C05a10Other
E C05a10==555	....	

C05a11.What is the capacity of the battery? Amp-hours (Ah)	NUMERIC: DECIMAL	C05a11
E C05a05.InList(2,3)	------------------------------	

C05a12.Does the system have an inverter?	SINGLE-SELECT	C05a12
E C05a05.InList(2,3)	01 ○ Yes 02 ○ No	

C05a13. How many years have you had this [DEVICE]? Record in years, if less than 1, record 1 NUMBER OF YEARS	NUMERIC: INTEGER	C05a13

C05a14. Did you buy this [DEVICE] paying upfront or under installment, do you rent it/pay a fee to use it, or did you receive it for free?	SINGLE-SELECT	C05a14
	01 ○ Bought, fully paid 02 ○ Bought, under installment 03 ○ Rent/pay fee to use 04 ○ Received for free	

C05a15. Who decided to purchase/ acquire this [DEVICE]? MEMBER ID	SINGLE-SELECT: LINKED	C05a15

C05a16. Who gave you this [DEVICE]?	SINGLE-SELECT	C05a16
E C05a14==4	001 ○ Non-government Organization (NGO) 002 ○ Chief of village 003 ○ Union government 004 ○ Local government 005 ○ Relative/Friend 555 ○ Other, specify	

C05a16Other. Other(Specify)	TEXT	C05a16Other
E C05a16==555	....	

C05a17. How much did you pay for this [DEVICE] upfront? LOCAL CURRENCY	NUMERIC: INTEGER	C05a17
E C05a14.InList(1,2)	------------------------------	

C05a18. What payment system do you use?	SINGLE-SELECT	C05a18
E C05a14.InList(3)	01 ○ Mobile Pay-as-you-go 02 ○ Other Pay-as-you go (scratch card, etc.) 03 ○ Fixed fee	

C05a18_period. How many months do you have to pay back for your device?	NUMERIC: INTEGER	C05a18 period
E C05a14.InList(2,3)	------------------------------	

C05a19. What is the monthly payment for this [DEVICE] (installment/ fee to rent/use)? LOCAL CURRENCY	NUMERIC: INTEGER	C05a19
E C05a14.InList(2,3)	------------------------------	

C05a20. Did/do you borrow money to make your payment for [DEVICE]?	SINGLE-SELECT	C05a20
	01 ○ Yes	

	02 ⦾ No

C05a21. Did you receive information and training on this [DEVICE]?	SINGLE-SELECT C05a21 01 ⦾ Yes 02 ⦾ No

C05a22. How many hours do you use [DEVICE] for lighting and other applications each day? HOURS Don't know 888 (Cannot exceed 24 hours) V1 `self<=24 || self==888` M1 Max 24	NUMERIC: INTEGER C05a22 –

C05c01. What is the most serious problem you experience with [DEVICE]?	SINGLE-SELECT C05c01 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 008 ⦾ Not enough sunshine 555 ⦾ Other, specify 111 ⦾ No problems

C.5 SOLAR BASED DEVICES
C.5.B MAIN SOLAR DEVICE

E `C05a01.ContainsAny(1,2,3)`

STATIC TEXT

Record information for the MAIN solar-based device, the device listed as "1" in the previous table.

C05b01. Are there certain months/seasons every year when the service is not as strong from [DEVICE]?	SINGLE-SELECT C05b01 01 ⦾ Yes 02 ⦾ No

C05b02a. What are the services like for each month? Note: Months for No service at all (Multiple choice). V1 `(!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) || (self.Contains(777) && !self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14))` M1 if choose none, not choose other	MULTI-SELECT C05b02a 001 ☐ January (ပြာသို - ဆောင်း) 002 ☐ February (တပို့တွဲ - ဆောင်း) 003 ☐ March (တပေါင်း - နွေ) 004 ☐ April (တန်ခူး - နွေ) 005 ☐ May (ကဆုန် - နွေ) 006 ☐ June (နယုန် - မိုး) 007 ☐ July (ဝါဆို - မိုး) 008 ☐ August (ဝါခေါင် - မိုး) 009 ☐ September (တော်သလင်း - မိုး) 010 ☐ October (သီတင်းကျွတ် - မိုး) 011 ☐ November (တန်ဆောင်မုန်း - ဆောင်း) 012 ☐ December (နတ်တော် - ဆောင်း) 777 ☐ None

C05b02b. What are the services like for each month? Note: For Worst months. (Multiple choice) V1 `(!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) || (self.Contains(777) && !self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14))` M1 if choose none, not choose other V2 `((C05b02a.Contains(1) && !C05b02b.Contains(1)) || (!C05b02a.Contains(1) && C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9`	MULTI-SELECT C05b02b 001 ☐ January (ပြာသို - ဆောင်း) 002 ☐ February (တပို့တွဲ - ဆောင်း) 003 ☐ March (တပေါင်း - နွေ) 004 ☐ April (တန်ခူး - နွေ) 005 ☐ May (ကဆုန် - နွေ) 006 ☐ June (နယုန် - မိုး) 007 ☐ July (ဝါဆို - မိုး)

```
,10,11,12,13,14,777))) && ((C05b02a.Contains(2) && !C05b
02b.Contains(2)) || (!C05b02a And 1770 other symbols [3]
```
M2 not contains not services at all months

008 ☐	August (ဝါဆိုခွေချွင်း - မိုး)
009 ☐	September (တော်သလင်း - မိုး)
010 ☐	October (သီတင်းကျွတ်တန် - မိုး)
011 ☐	November (တန်ဆောင်မုန်း - ဆောင်း)
012 ☐	December (နတ်တော် - ဆောင်း)
777 ☐	None

STATIC TEXT

Ask respondent first about the worst months and then about a typical month . If no seasonal changes , ask only about a typical month. Ask questions by ROW. A. WORST MONTHS B. TYPICAL MONTH

C05b03a. How many hours do you receive service from this [DEVICE] each day and night? (max 24 hours) A. WORST MONTHS Hours of supply Don't know 888	NUMERIC: INTEGER C05b03a -
E `C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)` V1 `self<=24` M1 Max 24	
C05b03b. How many hours do you receive service from this [DEVICE] each day and night? (max 24 hours) B. TYPICAL MONTH Hours of supply Don't know 888	NUMERIC: INTEGER C05b03b -
V1 `self<=24` M1 Max 24 V2 `(C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C05b03a) || self<=24` M2 greather than or equal worst month	
C05b04a. How many hours is service available from this [DEVICE] each evening, from 6:00 pm to 10:00 pm? (max 4 hours) A. WORST MONTHS Hours of supply Don't know 888	NUMERIC: INTEGER C05b04a -
E `C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)` V1 `self<=4` M1 Max 4	
C05b04b. How many hours is service available from this [DEVICE] each evening, from 6:00 pm to 10:00 pm? (max 4 hours) B. TYPICAL MONTH Hours of supply Don't know 888	NUMERIC: INTEGER C05b04b -
V1 `self<=4` M1 Max 4 V2 `(C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C05b04a) || self<=4` M2 greather than or equal worst month	
C05b05a. How many hours do you actually use the [DEVICE] each day for lighting and other applications? (max 24 hours) Cannot exceed hours in C05b03 A. WORST MONTHS Hours of supply Don't know 888	NUMERIC: INTEGER C05b05a -
E `C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12)` V1 `self<=C05b03a` M1 Max 24	
C05b05b. How many hours do you actually use the [DEVICE] each day for lighting and other applications? (max 24 hours) Cannot exceed hours in C05b03 B. TYPICAL MONTH Hours of supply Don't know 888	NUMERIC: INTEGER C05b05b -
V1 `self<=C05b03b`	

M1	Max 24
V2	`(C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12) && self >=C05b05a) || self<=C05b03b`
M2	greather than or equal worst month

C05b06. Is there any device you do not have that you would like to have?

SINGLE-SELECT   C05b06

- 001 ◯ Yes
- 002 ◯ No
- 888 ◯ Don't know

C05b07. What devices would you most like to have? Multiple response (Up to three devices)

E `C05b06!=2`

MULTI-SELECT   C05b07

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

C05b07Other. Other(Specify)

E `C05b07.Contains(555)`

TEXT   C05b07Other

....

C05b08.Overall, how satisfied with the service provided by the main solar device?

SINGLE-SELECT   C05b08

- 01 ◯ Very satisfied
- 02 ◯ Somewhat satisfied
- 03 ◯ Neutral
- 04 ◯ Unsatisfied
- 05 ◯ Very unsatisfied

C05b09. In what year did you get your first solar device? Year Don't know 888

NUMERIC: INTEGER   C05b09

- -

C05b10.Has solar been your main source of lighting/electricity since [YEAR in C05b09]?

SINGLE-SELECT   C05b10

- 001 ◯ Yes
- 002 ◯ No
- 888 ◯ Don't know

C05b11.What was your main source of lighting/electricity when it was not a solar device?

E `C05b10!=1`

SINGLE-SELECT   C05b11

- 001 ◯ National grid /Border or Thai grid /Township own grid
- 002 ◯ Local mini grid connection
- 003 ◯ Electric generator
- 004 ◯ Rechargeable battery and storage devices (e.g.: car battery)
- 005 ◯ Pico-hydro
- 006 ◯ kerosene/diesel lamp
- 007 ◯ Fuel-based lighting
- 008 ◯ Dry-cell (non-rechargeable) battery/ Torch/Flashlight/Lamp
- 009 ◯ Candle
- 555 ◯ Other, specify

C05b11Other. Other(Specify)

E `C05b11==555`

TEXT   C05b11Other

....

C05b12.Compared to the first time you used solar lighting, do you currently... Read aloud options

SINGLE-SELECT   C05b12

- 001 ◯ Use more solar lighting
- 002 ◯ Use about the same solar lighting
- 003 ◯ Use less solar lighting

	888 ⃝ Don't know

C05b13. What appliances do you use today that you did not use with your first solar lighting device?	MULTI-SELECT C05b13
	001 ☐ Electric charger
	002 ☐ Radio
	003 ☐ TV
	004 ☐ Fan
	006 ☐ No change
	555 ☐ Other, specify

C05b13Other. Other(Specify)	TEXT C05b13Other
E C05b13.Contains(555)	....

C.5 SOLAR BASED DEVICES
C.5.D USE OF ELECTRICITY SERVICE FROM SOLAR BASED DE

E C05a01.ContainsAny(1,2,3)

C.5 SOLAR BASED DEVICES / C.5.D USE OF ELECTRICITY SERVICE FROM SOLAR BASED DE
Roster: ELECTRICITY USE FROM SOLAR BASED DEVICES
generated by multi-select question C1   C5D_UseElectricitySolarDevice

C05d_01. In a typical day how many of the %rostertitle% are used. Write 0 if none 0◻NEXT ROW	NUMERIC: INTEGER C05d_01
E @rowcode==101|| @rowcode==102|| @rowcode ==103|| @rowcode ==104|| @rowcode==201|| @rowcode==202|| @rowcode==203|| @rowcode==301|| @rowcode==302|| @rowcode==303|| @rowcode ==304|| @rowcode==305 And 357 other symbols [6]	- -
V1 self<=C2	
M1 Less than or equal total	

C05d_02. What is the total sum of hours used? Number of hours	NUMERIC: INTEGER C05d_02
E C05d_01>=1 && (@rowcode==101|| @rowcode==102|| @rowcode==103|| @rowcode==104|| @rowcode==201|| @rowcode==202|| @rowcode==203|| @rowcode==301|| @rowcode==302|| @rowcode==303|| @rowcode==304|| And 239 other symbols [7]	- -

C.6,7,8 ELECTRICITY, CHARGING, STREET LIGHTING

C.6,7,8 ELECTRICITY, CHARGING, STREET LIGHTING
C.6 MAIN SOURCE OF ELECTRICITY

C06_01. Of all the sources that you mentioned above, which is the source that you use the most in your household? This will be the MAIN electricity source that is referred to later.	SINGLE-SELECT C06_01
	001 ⃝ National grid /Border or Thai grid /Township own grid
V1 (self==1 && C01f01.InList(1,2,3)) || self!=1	002 ⃝ Local Mini Grid connection
M1 Please check with government grid connection	003 ⃝ Electric generator
V2 (self==2 && C02a01==1) || self!=2	004 ⃝ Solar Home System
M2 Please check with mini grid connection	005 ⃝ Solar Lantern/Lighting System
V3 (self==3 && C03a01==1) || self!=3	006 ⃝ Rechargeable Battery
M3 Please check with generator section	007 ⃝ Pico-Hydro
V4 (self==4 && C05a01.Contains(1)) || self!=4	008 ⃝ Dry-cell battery
M4 Please check with solar system	009 ⃝ No electricity
V5 (self==5 && C05a01.ContainsAny(2,3)) || self!=5	555 ⃝ Other, specify
M5 Please check with solar system	
V6 (self==6 && C04a01==1) || self!=6	

M6	Please check with rechargeable battery section	

	C06_01Other. Other, Specify	TEXT C06_01Other
E	C06_01==555	....

C.6,7,8 ELECTRICITY, CHARGING, STREET LIGHTING
C.7 CHARGING MOBILE PHONE

	C07_01. How many mobile phones do the household that members are using?	NUMERIC: INTEGER C07_01

	C07_02. Are members of your household able to charge a mobile phone inside your dwelling?	SINGLE-SELECT C07_02 01 ◯ Yes 02 ◯ No
E	C07_01>=1	

	C07_03. Are members of your household able to charge all their mobile phones as often as they need inside your dwelling?	SINGLE-SELECT C07_03 001 ◯ Yes 002 ◯ No 888 ◯ Don't know
E	C07_02==1	

	C07_04. Can you charge at least one mobile phone to full charge everyday inside your dwelling?	SINGLE-SELECT C07_04 01 ◯ Yes 02 ◯ No
E	C07_02==1	

	C07_05. Can you charge at least one mobile phone to full charge in 3 days inside your dwelling?	SINGLE-SELECT C07_05 01 ◯ Yes 02 ◯ No
E	C07_04==2	

	C07_06. How many mobile phones of your household members do you charge outside your dwelling? Number of mobile phones	NUMERIC: INTEGER C07_06
E	C07_03!=1	

	C07_07. Do members of your household have to go more than 500 meters (walk more than 5 minutes) to charge your mobile phones outside your dwelling?	SINGLE-SELECT C07_07 01 ◯ Yes 02 ◯ No
E	C07_06>=1	

	C07_08. How much does your household spend each month (in total) on charging the mobile phone(s) outside your dwelling? Local currency	NUMERIC: INTEGER C07_08
E	C07_06>=1	

C.6,7,8 ELECTRICITY, CHARGING, STREET LIGHTING
C.8 STREET LIGHTING

STATIC TEXT

The respondent should be the most knowledgeable household member on household electricity, as identified in

	C08_01. Does your neighborhood/village have any form of street lighting?	SINGLE-SELECT C08_01 01 ◯ Yes 02 ◯ No

C08_02. How satisfied are you by the brightness of the street lighting service in your neighborhood? Read options aloud E C08_01==1	SINGLE-SELECT C08_02 01 ○ Very unsatisfied 02 ○ Somewhat unsatisfied 03 ○ Somewhat satisfied 04 ○ Very satisfied
C08_03. What do you think are the risks/problems with street lighting in your neighborhood? Multiple responses possible E C08_01==1	MULTI-SELECT C08_03 001 ☐ Electrocution 002 ☐ Poor installation 003 ☐ Poor maintenance 004 ☐ Outages/blackouts of street lighting 005 ☐ Does not stay on all night 777 ☐ No risks/problems
C08_04. Do you have a light that you could turn on at night to provide light outside your home? E C08_01==1	SINGLE-SELECT C08_04 01 ○ Yes 02 ○ No
C08_05.How many hours do you turn it on each night after it becomes dark? Number of hours E C08_04==1	NUMERIC: DECIMAL C08_05 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

D. WILLINGNESS TO PAY FOR ELECTRICITY

STATIC TEXT

Respondent should be most knowledgeable member on household electricity. Households who are not connected to main-grid are eligible to answer to this module.

Dresp1 Enumerator: Record Respondent ID for this section	SINGLE-SELECT: LINKED Dresp1

D. WILLINGNESS TO PAY FOR ELECTRICITY
D.1 FOR A GRID CONNECTION

D01_01. Interviewer/CAPI check: Is the household connected to the national grid? V1 (C01f01.InRange(1,3) && D01_01==1) || D01_01!=1 M1 Check again with C1	SINGLE-SELECT D01_01 01 ○ Yes 02 ○ No

STATIC TEXT

Electricity requires several types of payments. There are three parts to the cost of electricity: connection, wiring, and monthly use. In other words, to use electricity you need to have a wire from a meter in your house to the pole first. That is the connection. You also need to have wires to connect appliances within your house to the meter. This is the wiring. Finally, to keep using electricity you must pay for what is used and measured by the meter, or it will be turned off, this is the cost of monthly use. I would like to ask you questions only about the first cost of connecting – getting a wire from the electricity poles to a meter on your house.

STATIC TEXT

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.

D01_03a. Will you be willing to participate in village electrification effort, with VEC to electrify your home and village?	SINGLE-SELECT D01_03a 01 ○ Yes 02 ○ No

E D01_01==2	03 ○ May be

D01_03b. If no, why not participate? E D01_03a==2	SINGLE-SELECT D01_03b 01 ○ No time participate 02 ○ No money to contribute 03 ○ No knowledge to contribute 04 ○ No one invite to participate 05 ○ Government housing 06 ○ Private owner housing

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.1 FOR A GRID CONNECTION
PAYMENT %

E D01_01==2

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.1 FOR A GRID CONNECTION / PAYMENT %
D.1A 100% PAYMENT

E Quest.IRnd()>=0.833333333

D01a_04. Would you be willing to pay [150,000 MMK] for an electricity connection upfront?	SINGLE-SELECT D01a_04 01 ○ Yes 02 ○ No
D01a_06. Would you be willing to pay {150,000 MMK} for an electricity connection, if you were given 3 Months Installment = 50,000MMK per month E D01a_04==2	SINGLE-SELECT D01a_06 01 ○ Yes 02 ○ No
D01a_07. If no, why not participate? E D01a_06==2	SINGLE-SELECT D01a_07 001 ○ Cannot afford the payment 002 ○ Do not need electricity 003 ○ Electricity service is unreliable 004 ○ Monthly fee is too expensive 555 ○ Other, specify
D01a_07Other. Other(Specify) E D01a_07==555	TEXT D01a_07Other ....
D01a_08. Would you be willing to pay {150,000 MMK} for an electricity connection, if you were given 6 Months Installment = 25,000MMK per month E D01a_06==2	SINGLE-SELECT D01a_08 01 ○ Yes 02 ○ No
D01a_09. If no, why not participate? E D01a_08==2	SINGLE-SELECT D01a_09 001 ○ Cannot afford the payment 002 ○ Do not need electricity 003 ○ Electricity service is unreliable 004 ○ Monthly fee is too expensive 555 ○ Other, specify
D01a_09Other. Other(Specify) E D01a_09==555	TEXT D01a_09Other ....
D01a_10. Would you be willing to pay {150,000 MMK} for an electricity connection, if you were given 12 Months Installment = 12,500MMK per month	SINGLE-SELECT D01a_10 01 ○ Yes 02 ○ No

D01a_11. If no, why not participate?	SINGLE-SELECT D01a_11
E D01a_10==2	001 ◯ Cannot afford the payment 002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 555 ◯ Other, specify

D01a_11Other. Other(Specify)	TEXT D01a_11Other
E D01a_11==555	....

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.1 FOR A GRID CONNECTION / PAYMENT %

D.1B 71% PAYMENT

E Quest.IRnd()>=0.666666667 && Quest.IRnd()<0.833333333

D01b_04. Would you be willing to pay [106,500 MMK] for an electricity connection upfront?	SINGLE-SELECT D01b_04
	01 ◯ Yes 02 ◯ No

D01b_06. Would you be willing to pay {106,500 MMK} for an electricity connection, if you were given 3 Months Installment = 35,667MMK per month	SINGLE-SELECT D01b_06
E D01b_04==2	01 ◯ Yes 02 ◯ No

D01b_07. If no, why not participate?	SINGLE-SELECT D01b_07
E D01b_06==2	001 ◯ Cannot afford the payment 002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 555 ◯ Other, specify

D01b_07Other. Other(Specify)	TEXT D01b_07Other
E D01b_07==555	....

D01b_08. Would you be willing to pay {106,500 MMK} for an electricity connection, if you were given 6 Months Installment = 17,833MMK per month	SINGLE-SELECT D01b_08
E D01b_06==2	01 ◯ Yes 02 ◯ No

D01b_09. If no, why not participate?	SINGLE-SELECT D01b_09
E D01b_08==2	001 ◯ Cannot afford the payment 002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 555 ◯ Other, specify

D01b_09Other. Other(Specify)	TEXT D01b_09Other
E D01b_09==555	....

D01b_10. Would you be willing to pay {106,500 MMK} for an electricity connection, if you were given 12 Months Installment = 8,917MMK per month	SINGLE-SELECT D01b_10
E D01b_08==2	01 ◯ Yes 02 ◯ No

D01b_11. If no, why not participate?	SINGLE-SELECT	D01b_11
E D01b_10==2	001 ⭘ Cannot afford the payment 002 ⭘ Do not need electricity 003 ⭘ Electricity service is unreliable 004 ⭘ Monthly fee is too expensive 555 ⭘ Other, specify	

D01b_11Other. Other(Specify)	TEXT	D01b_11Other
E D01b_11==555	....	

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.1 FOR A GRID CONNECTION / PAYMENT %

D.1C 57% PAYMENT

E Quest.IRnd()>=0.5 && Quest.IRnd()<0.666666667

D01c_04. Would you be willing to pay [85,500 MMK] for an electricity connection upfront?	SINGLE-SELECT	D01c_04
	01 ⭘ Yes 02 ⭘ No	

D01c_06. Would you be willing to pay {85,500 MMK} for an electricity connection, if you were given 3 Months Installment = 28,667MMK per month	SINGLE-SELECT	D01c_06
E D01c_04==2	01 ⭘ Yes 02 ⭘ No	

D01c_07. If no, why not participate?	SINGLE-SELECT	D01c_07
E D01c_06==2	001 ⭘ Cannot afford the payment 002 ⭘ Do not need electricity 003 ⭘ Electricity service is unreliable 004 ⭘ Monthly fee is too expensive 555 ⭘ Other, specify	

D01c_07Other. Other(Specify)	TEXT	D01c_07Other
E D01c_07==555	....	

D01c_08. Would you be willing to pay {85,500 MMK} for an electricity connection, if you were given 6 Months Installment = 14,333MMK per month	SINGLE-SELECT	D01c_08
E D01c_06==2	01 ⭘ Yes 02 ⭘ No	

D01c_09. If no, why not participate?	SINGLE-SELECT	D01c_09
E D01c_08==2	001 ⭘ Cannot afford the payment 002 ⭘ Do not need electricity 003 ⭘ Electricity service is unreliable 004 ⭘ Monthly fee is too expensive 555 ⭘ Other, specify	

D01c_09Other. Other(Specify)	TEXT	D01c_09Other
E D01c_09==555	....	

D01c_10. Would you be willing to pay {85,500 MMK} for an electricity connection, if you were given 12 Months Installment = 7,167MMK per month	SINGLE-SELECT	D01c_10
E D01c_08==2	01 ⭘ Yes 02 ⭘ No	

D01c_11. If no, why not participate?	SINGLE-SELECT	D01c_11
E D01c_10==2	001 ⭘ Cannot afford the payment	

	002 ○ Do not need electricity
	003 ○ Electricity service is unreliable
	004 ○ Monthly fee is too expensive
	555 ○ Other, specify
D01c_11Other. Other(Specify) E D01c_11==555	TEXT D01c_11Other ....

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.1 FOR A GRID CONNECTION / PAYMENT %

D.1D 43% PAYMENT

E Quest.IRnd()>=0.333333333 && Quest.IRnd()<0.5

D01d_04. Would you be willing to pay [64,500 MMK] for an electricity connection upfront?	SINGLE-SELECT D01d_04 01 ○ Yes 02 ○ No
D01d_06. Would you be willing to pay {64,500 MMK} for an electricity connection, if you were given 3 Months Installment = 21,667MMK per month E D01d_04==2	SINGLE-SELECT D01d_06 01 ○ Yes 02 ○ No
D01d_07. If no, why not participate? E D01d_06==2	SINGLE-SELECT D01d_07 001 ○ Cannot afford the payment 002 ○ Do not need electricity 003 ○ Electricity service is unreliable 004 ○ Monthly fee is too expensive 555 ○ Other, specify
D01d_07Other. Other(Specify) E D01d_07==555	TEXT D01d_07Other ....
D01d_08. Would you be willing to pay {64,500 MMK} for an electricity connection, if you were given 6 Months Installment = 10,833MMK per month E D01d_06==2	SINGLE-SELECT D01d_08 01 ○ Yes 02 ○ No
D01d_09. If no, why not participate? E D01d_08==2	SINGLE-SELECT D01d_09 001 ○ Cannot afford the payment 002 ○ Do not need electricity 003 ○ Electricity service is unreliable 004 ○ Monthly fee is too expensive 555 ○ Other, specify
D01d_09Other. Other(Specify) E D01d_09==555	TEXT D01d_09Other ....
D01d_10. Would you be willing to pay {64,500 MMK} for an electricity connection, if you were given 12 Months Installment = 5,417MMK per month E D01d_08==2	SINGLE-SELECT D01d_10 01 ○ Yes 02 ○ No
D01d_11. If no, why not participate? E D01d_10==2	SINGLE-SELECT D01d_11 001 ○ Cannot afford the payment 002 ○ Do not need electricity 003 ○ Electricity service is unreliable

| | 004 ○ Monthly fee is too expensive |
| | 555 ○ Other, specify |

| D01d_11Other. Other(Specify) | TEXT D01d_11Other |
| E D01d_11==555 | .... |

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.1 FOR A GRID CONNECTION / PAYMENT %
D.1E 29% PAYMENT

E Quest.IRnd()>=0.166666667 && Quest.IRnd()<0.333333333

| D01e_04. Would you be willing to pay [43,500 MMK] for an electricity connection upfront? | SINGLE-SELECT D01e_04
01 ○ Yes
02 ○ No |

| D01e_06. Would you be willing to pay {43,500 MMK} for an electricity connection, if you were given 3 Months Installment = 14,667MMK per month

E D01e_04==2 | SINGLE-SELECT D01e_06
01 ○ Yes
02 ○ No |

| D01e_07. If no, why not participate?

E D01e_06==2 | SINGLE-SELECT D01e_07
001 ○ Cannot afford the payment
002 ○ Do not need electricity
003 ○ Electricity service is unreliable
004 ○ Monthly fee is too expensive
555 ○ Other, specify |

| D01e_07Other. Other(Specify)

E D01e_07==555 | TEXT D01e_07Other
.... |

| D01e_08. Would you be willing to pay {43,500 MMK} for an electricity connection, if you were given 6 Months Installment = 7,333MMK per month

E D01e_06==2 | SINGLE-SELECT D01e_08
01 ○ Yes
02 ○ No |

| D01e_09. If no, why not participate?

E D01e_08==2 | SINGLE-SELECT D01e_09
001 ○ Cannot afford the payment
002 ○ Do not need electricity
003 ○ Electricity service is unreliable
004 ○ Monthly fee is too expensive
555 ○ Other, specify |

| D01e_09Other. Other(Specify)

E D01e_09==555 | TEXT D01e_09Other
.... |

| D01e_10. Would you be willing to pay {43,500} for an electricity connection, if you were given 12 Months Installment = 3,667MMK per month

E D01e_08==2 | SINGLE-SELECT D01e_10
01 ○ Yes
02 ○ No |

| D01e_11. If no, why not participate?

E D01e_10==2 | SINGLE-SELECT D01e_11
001 ○ Cannot afford the payment
002 ○ Do not need electricity
003 ○ Electricity service is unreliable
004 ○ Monthly fee is too expensive
555 ○ Other, specify |

D01e_11Other. Other(Specify)	TEXT	D01e_11Other

E D01e_11==555

....

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.1 FOR A GRID CONNECTION / PAYMENT %
D.1F 14% PAYMENT

E Quest.IRnd()<0.166666667

D01f_04. Would you be willing to pay [21,000 MMK] for an electricity connection upfront?	SINGLE-SELECT D01f_04 01 ◯ Yes 02 ◯ No

D01f_06. Would you be willing to pay {21,000 MMK} for an electricity connection, if you were given 3 Months Installment = 7,000MMK per month	SINGLE-SELECT D01f_06 01 ◯ Yes 02 ◯ No

E D01f_04==2

D01f_07. If no, why not participate?	SINGLE-SELECT D01f_07 001 ◯ Cannot afford the payment 002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 555 ◯ Other, specify

E D01f_06==2

D01f_07Other. Other(Specify)	TEXT D01f_07Other

E D01f_07==555

....

D01f_08. Would you be willing to pay {21,000 MMK} for an electricity connection, if you were given 6 Months Installment = 3,500MMK per month	SINGLE-SELECT D01f_08 01 ◯ Yes 02 ◯ No

E D01f_06==2

D01f_09. If no, why not participate?	SINGLE-SELECT D01f_09 001 ◯ Cannot afford the payment 002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 555 ◯ Other, specify

E D01f_08==2

D01f_09Other. Other(Specify)	TEXT D01f_09Other

E D01f_09==555

....

D01f_10. Would you be willing to pay {21,000 MMK} for an electricity connection, if you were given 12 Months Installment = 1,750MMK per month	SINGLE-SELECT D01f_10 01 ◯ Yes 02 ◯ No

E D01f_08==2

D01f_11. If no, why not participate?	SINGLE-SELECT D01f_11 001 ◯ Cannot afford the payment 002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 555 ◯ Other, specify

E D01f_10==2

D01f_11Other. Other(Specify)	TEXT D01f_11Other

E D01f_11==555

....

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.1 FOR A GRID CONNECTION / PAYMENT %
D.1G 0% PAYMENT

D01_11. If the connection fee were waived, would you get a grid connection?	SINGLE-SELECT D01 11 01 ◯ Yes 02 ◯ No
D01_12. If no, why not participate? E D01_11==2	SINGLE-SELECT D01 12 002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 005 ◯ Cannot afford to pay the contribution to build network within village 555 ◯ Other, specify
D01_12Other. Other(Specify) E D01_12==555	TEXT D01_12Other ••
D01_13. How much do you think it would cost to do all the internal electrical wiring in your house? Local currency Don't Know…………………….888	NUMERIC: INTEGER D01 13 –
D01_14. Think about the amount you would need to spend each month for electricity, not the connection fee. How much would you need to spend each month for electricity? Local currency Don't Know…………………….888	NUMERIC: INTEGER D01 14 –

D. WILLINGNESS TO PAY FOR ELECTRICITY
D.2 FOR SOLAR HOME SYSTEM

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.2 FOR SOLAR HOME SYSTEM
D.2 HIGH CAPACITY DEVICE 100 WP

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.2 FOR SOLAR HOME SYSTEM / D.2 HIGH CAPACITY DEVICE 100 WP
D.2A 100% PAYMENT

E `Quest.IRnd()>=0.666666667 && Quest.IRnd()<0.833333333`

D02a_01. Would you be willing to pay 300,000MMK for this solar device?	SINGLE-SELECT D02a 01 01 ◯ Yes 02 ◯ No
D02a_03. Would you be willing to pay {300,000 MMK} for this solar device, if you were given 6 Months to make payment? Installment = 50,000MMK per month E D02a_01==2	SINGLE-SELECT D02a 03 01 ◯ Yes 02 ◯ No
D02a_04. If no, why not participate? E D02a_03==2	SINGLE-SELECT D02a 04 01 ◯ Cannot afford the payment 02 ◯ Do not need electricity 03 ◯ Maintenance/services of device is not available

	04 ○ Do not have confidence in the quality of the system
D02a_05. Would you be willing to pay {300,000 MMK} for this solar device, if you were given 12 Months to make payment? Installment = 25,000MMK per month E D02a_03==2	SINGLE-SELECT D02a_05 01 ○ Yes 02 ○ No
D02a_06. If no, why not participate? E D02a_05==2	SINGLE-SELECT D02a_06 01 ○ Cannot afford the payment 02 ○ Do not need electricity 03 ○ Maintenance/services of device is not available 04 ○ Do not have confidence in the quality of the system
D02a_07. Would you be willing to pay {300,000 MMK} for this solar device, if you were given 24 Months to make payment? Installment = 12,500MMK per month E D02a_05==2	SINGLE-SELECT D02a_07 01 ○ Yes 02 ○ No
D02a_08. If no, why not participate? E D02a_07==2	SINGLE-SELECT D02a_08 01 ○ Cannot afford the payment 02 ○ Do not need electricity 03 ○ Maintenance/services of device is not available 04 ○ Do not have confidence in the quality of the system

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.2 FOR SOLAR HOME SYSTEM / D.2 HIGH CAPACITY DEVICE 100 WP
D.2B 66% PAYMENT

E Quest.IRnd()>=0.333333333 && Quest.IRnd()<0.5

D02b_01. Would you be willing to pay 198,000MMK for this solar device?	SINGLE-SELECT D02b_01 01 ○ Yes 02 ○ No
D02b_03. Would you be willing to pay {198,000 MMK} for this solar device, if you were given 6 Months? Installment = 33,000MMK per month E D02b_01==2	SINGLE-SELECT D02b_03 01 ○ Yes 02 ○ No
D02b_04. If no, why not participate? E D02b_03==2	SINGLE-SELECT D02b_04 01 ○ Cannot afford the payment 02 ○ Do not need electricity 03 ○ Maintenance/services of device is not available 04 ○ Do not have confidence in the quality of the system
D02b_05. Would you be willing to pay {198,000 MMK} for this solar device, if you were given 12 Months? Installment = 16,500MMK per month E D02b_03==2	SINGLE-SELECT D02b_05 01 ○ Yes 02 ○ No
D02b_06. If no, why not participate? E D02b_05==2	SINGLE-SELECT D02b_06 01 ○ Cannot afford the payment 02 ○ Do not need electricity

| | 03 ○ Maintenance/services of device is not available |
| | 04 ○ Do not have confidence in the quality of the system |

D02b_07. Would you be willing to pay {198,000 MMK} for this solar device, if you were given 24 Months? Installment = 8,250MMK per month E D02b_05==2	SINGLE-SELECT D02b_07 01 ○ Yes 02 ○ No
D02b_08. If no, why not participate? E D02b_07==2	SINGLE-SELECT D02b_08 01 ○ Cannot afford the payment 02 ○ Do not need electricity 03 ○ Maintenance/services of device is not available 04 ○ Do not have confidence in the quality of the system

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.2 FOR SOLAR HOME SYSTEM / D.2 HIGH CAPACITY DEVICE 100 WP
D.2C 33% PAYMENT

E Quest.IRnd()<0.166666667

D02c_01. Would you be willing to pay 99,000MMK for this solar device?	SINGLE-SELECT D02c_01 01 ○ Yes 02 ○ No
D02c_03. Would you be willing to pay {99,000 MMK} for this solar device, if you were given 6 Months? Installment = 16,500MMK per month E D02c_01==2	SINGLE-SELECT D02c_03 01 ○ Yes 02 ○ No
D02c_04. If no, why not participate? E D02c_03==2	SINGLE-SELECT D02c_04 01 ○ Cannot afford the payment 02 ○ Do not need electricity 03 ○ Maintenance/services of device is not available 04 ○ Do not have confidence in the quality of the system
D02c_05. Would you be willing to pay {99,000 MMK} for this solar device, if you were given 12 Months? Installment = 8,250MMK per month E D02c_03==2	SINGLE-SELECT D02c_05 01 ○ Yes 02 ○ No
D02c_06. If no, why not participate? E D02c_05==2	SINGLE-SELECT D02c_06 01 ○ Cannot afford the payment 02 ○ Do not need electricity 03 ○ Maintenance/services of device is not available 04 ○ Do not have confidence in the quality of the system
D02c_07. Would you be willing to pay {99,000 MMK} for this solar device, if you were given 24 Months? Installment = 4,125MMK per month E D02c_05==2	SINGLE-SELECT D02c_07 01 ○ Yes 02 ○ No
D02c_08. If no, why not participate? E D02c_07==2	SINGLE-SELECT D02c_08 01 ○ Cannot afford the payment 02 ○ Do not need electricity

| | 03 ◯ Maintenance/services of device is not available |
| | 04 ◯ Do not have confidence in the quality of the system |

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.2 FOR SOLAR HOME SYSTEM

D.3 LOW CAPACITY DEVICE 45 WP

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.2 FOR SOLAR HOME SYSTEM / D.3 LOW CAPACITY DEVICE 45 WP

D.3A 100% PAYMENT

E `Quest.IRnd()>=0.833333333`

D03a_01. Would you be willing to pay 120,000MMK for this solar device?	SINGLE-SELECT D03a_01 01 ◯ Yes 02 ◯ No
D03a_03. Would you be willing to pay {120,000 MMK} for this solar device, if you were given 6 Months? Installment = 20,000MMK per month E `D03a_01==2`	SINGLE-SELECT D03a_03 01 ◯ Yes 02 ◯ No
D03a_04. If no, why not participate? E `D03a_03==2`	SINGLE-SELECT D03a_04 01 ◯ Cannot afford the payment 02 ◯ Do not need electricity 03 ◯ Maintenance/services of device is not available 04 ◯ Do not have confidence in the quality of the system
D03a_05. Would you be willing to pay {120,000 MMK} for this solar device, if you were given 12 Months? Installment = 10,000MMK per month E `D03a_03==2`	SINGLE-SELECT D03a_05 01 ◯ Yes 02 ◯ No
D03a_06. If no, why not participate? E `D03a_05==2`	SINGLE-SELECT D03a_06 01 ◯ Cannot afford the payment 02 ◯ Do not need electricity 03 ◯ Maintenance/services of device is not available 04 ◯ Do not have confidence in the quality of the system
D03a_07. Would you be willing to pay {120,000 MMK} for this solar device, if you were given 24 Months? Installment = 5,000MMK per month E `D03a_05==2`	SINGLE-SELECT D03a_07 01 ◯ Yes 02 ◯ No
D03a_08. If no, why not participate? E `D03a_07==2`	SINGLE-SELECT D03a_08 01 ◯ Cannot afford the payment 02 ◯ Do not need electricity 03 ◯ Maintenance/services of device is not available 04 ◯ Do not have confidence in the quality of the system

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.2 FOR SOLAR HOME SYSTEM / D.3 LOW CAPACITY DEVICE 45 WP

D.3B 66% PAYMENT

E `Quest.IRnd()>=0.5 && Quest.IRnd()<0.666666667`

D03b_01. Would you be willing to pay 79,000MMK for this solar device?	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	D03b_01
D03b_03. Would you be willing to pay {79,000 MMK} for this solar device, if you were given 6 Months? Installment = 13,167MMK per month E D03b_01==2	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	D03b_03
D03b_04. If no, why not participate? E D03b_03==2	SINGLE-SELECT 01 ◯ Cannot afford the payment 02 ◯ Do not need electricity 03 ◯ Maintenance/services of device is not available 04 ◯ Do not have confidence in the quality of the system	D03b_04
D03b_05. Would you be willing to pay {79,000 MMK} for this solar device, if you were given 12 Months? Installment = 6,583MMK per month E D03b_03==2	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	D03b_05
D03b_06. If no, why not participate? E D03b_05==2	SINGLE-SELECT 01 ◯ Cannot afford the payment 02 ◯ Do not need electricity 03 ◯ Maintenance/services of device is not available 04 ◯ Do not have confidence in the quality of the system	D03b_06
D03b_07. Would you be willing to pay {79,000 MMK} for this solar device, if you were given 24 Months? Installment = 3,292MMK per month E D03b_05==2	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	D03b_07
D03b_08. If no, why not participate? E D03b_07==2	SINGLE-SELECT 01 ◯ Cannot afford the payment 02 ◯ Do not need electricity 03 ◯ Maintenance/services of device is not available 04 ◯ Do not have confidence in the quality of the system	D03b_08

D. WILLINGNESS TO PAY FOR ELECTRICITY / D.2 FOR SOLAR HOME SYSTEM / D.3 LOW CAPACITY DEVICE 45 WP

D.3C 33% PAYMENT

E Quest.IRnd()>=0.166666667 && Quest.IRnd()<0.333333333

D03c_01. Would you be willing to pay 40,000MMK for this solar device?	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	D03c_01
D03c_03. Would you be willing to pay {40,000 MMK} for this solar device, if you were given 6 Months? Installment = 6,667MMK per month E D03c_01==2	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	D03c_03
D03c_04. If no, why not participate? E D03c_03==2	SINGLE-SELECT 01 ◯ Cannot afford the payment 02 ◯ Do not need electricity 03 ◯ Maintenance/services of device is not available	D03c_04

	04 ○ Do not have confidence in the quality of the system

	SINGLE-SELECT D03c_05
D03c_05. Would you be willing to pay {40,000 MMK} for this solar device, if you were given 12 Months? Installment = 3,333MMK per month E D03c_03==2	01 ○ Yes 02 ○ No

	SINGLE-SELECT D03c_06
D03c_06. If no, why not participate? E D03c_05==2	01 ○ Cannot afford the payment 02 ○ Do not need electricity 03 ○ Maintenance/services of device is not available 04 ○ Do not have confidence in the quality of the system

	SINGLE-SELECT D03c_07
D03c_07. Would you be willing to pay {40,000 MMK} for this solar device, if you were given 24 Months? Installment = 1,667MMK per month E D03c_05==2	01 ○ Yes 02 ○ No

	SINGLE-SELECT D03c_08
D03c_08. If no, why not participate? E D03c_07==2	01 ○ Cannot afford the payment 02 ○ Do not need electricity 03 ○ Maintenance/services of device is not available 04 ○ Do not have confidence in the quality of the system

D. WILLINGNESS TO PAY FOR ELECTRICITY
D.4 WILLING TO CONTRIBUTE TO BUILD DISTRIBUTION NETWORK IN THE VILLAGE

	SINGLE-SELECT D04_01
D04_01. Would you be willing to contribute 300,000MMK – 400,000MMK to build distribution network in the village?	01 ○ Yes 02 ○ No

	SINGLE-SELECT D04_02
D04_02. Would you be willing to make contribution to build network in the village, if you are given to pay by installment? 1. 3 installment over 1 year E D04_01==2	001 ○ Yes 002 ○ No 003 ○ May be 888 ○ Don't Know

	SINGLE-SELECT D04_03
D04_03. If no, why not? E D04_02==2	001 ○ Cannot afford the payment 002 ○ Do not need electricity 003 ○ Electricity service is unreliable 004 ○ Monthly fee is too expensive 555 ○ Other, specify

	TEXT D04_03Other
D04_03Other. Other(Specify) E D04_03==555	....

	SINGLE-SELECT D04_04
D04_04. Would you be willing to make contribution to build network in the village, if you are given to pay by installment? 2. 6 installment over 2 years E D04_02==2	001 ○ Yes 002 ○ No 003 ○ May be 888 ○ Don't Know

	SINGLE-SELECT D04_05
D04_05. If no, why not?	001 ○ Cannot afford the payment

E D04_04==2	002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 555 ◯ Other, specify
D04_05Other. Other(Specify) E D04_05==555	TEXT D04_05Other ∙∙∙
D04_06. Would you be willing to make contribution to build network in the village, if you are given to pay by installment? 3. 12 installment over 3 years. 6 installment over 2 years E D04_04==2	SINGLE-SELECT D04_06 001 ◯ Yes 002 ◯ No 003 ◯ May be 888 ◯ Don't Know
D04_07. If no, why not? E D04_06==2	SINGLE-SELECT D04_07 001 ◯ Cannot afford the payment 002 ◯ Do not need electricity 003 ◯ Electricity service is unreliable 004 ◯ Monthly fee is too expensive 555 ◯ Other, specify
D04_07Other. Other(Specify) E D04_07==555	TEXT D04_07Other ∙∙∙

E. CANDLE LIGHTING, DIESEL, KAROSENE FUEL FOR LAMP LIGHTING

Eresp1 Enumerator: Record Respondent ID for this section	SINGLE-SELECT: LINKED Eresp1

E. CANDLE LIGHTING, DIESEL, KAROSENE FUEL FOR LAMP LIGHTING
E.1 CANDLE LIGHTING

E01_01. In the last 12 months, did you use Candle only for lighting in you home? (exclude religious)	SINGLE-SELECT E01_01 01 ◯ Yes 02 ◯ No
E01_02. In the last 12 months, how many months did you use CANDLE]? _____ Number of months If "0" skip to ---- E E01_01==1 V1 self>0 && self<=12 M1 >0 and <=12	NUMERIC: INTEGER E01_02 ‒
E01_02day. In the typical months that you use candle, how many days do you use CANDLE on average per month? _____ Number of days E E01_01==1 V1 self>0 && self<=30 M1 >0 && <=30	NUMERIC: INTEGER E01_02day ‒
E01_03. In the typical month that you use candle, how many hours do you use CANDLE each day? _____ HOURS per day E E01_01==1	NUMERIC: DECIMAL E01_03 ‒

V1	self<=24
M1	Max 24

E01_04. In the typical month that you use Candle, what is the total quantity of CANDLE] you use in a typical week _____ Number of candles	NUMERIC: INTEGER E01_04
E `E01_01==1 && E01_02>0`	

E01_05. In the typical month that you use candle, how much do you spend on CANDLE in a typical week _____ Kyats per week	NUMERIC: INTEGER E01_05
E `E01_01==1 && E01_02>0`	

E01_06. What don't you like most about using the CANDLE? Record up to 2 responses	MULTI-SELECT E01_06
E `E01_01==1`	001 ☐ Candle is expensive to use for lighting 002 ☐ Accidents can happen 003 ☐ Bad for health 004 ☐ It's not bright enough 005 ☐ Accident to Fire Hazard 555 ☐ Other, specify 777 ☐ No problems

E01_06Other. Other, specify	TEXT E01_06Other
E `E01_06.Contains(555)`	

E. CANDLE LIGHTING, DIESEL, KAROSENE FUEL FOR LAMP LIGHTING
E.2 LAMP LIGHTING

E. CANDLE LIGHTING, DIESEL, KAROSENE FUEL FOR LAMP LIGHTING / E.2 LAMP LIGHTING
Roster: LAMP LIGHTING
generated by fixed list   E2_LampLighting

01 Wick lamp

02 Hurricane Lantern (with Glass Cover)

03 Biogas Lamp

E02_01. In the last 12 months, did you use %rostertitle% for lighting?	SINGLE-SELECT E02_01
	01 ◯ Yes 02 ◯ No

E02_01b. What type of fuel do you use for %rostertitle% ?	SINGLE-SELECT E02_01b
E `E02_01==1`	01 ◯ Diesel 02 ◯ Karosene 03 ◯ Biogas

E02_01a. In the last 12 months, how many months did you use %rostertitle% for lighting?	NUMERIC: INTEGER E02_01a
E `E02_01==1` V1 `self>0 && self<=12` M1 >0 and <=12	

E02_02. How much did you pay for %rostertitle%	NUMERIC: INTEGER E02_02
E `E02_01==1`	

E02_03. In the typical month, how many of this	NUMERIC: INTEGER E02_03

%rostertitle% do you use?

E E02_01==1

E02_05. In the typical month that you use this lamp, how many days did you use this lamp? _____Days

NUMERIC: INTEGER   E02_05

E E02_01==1
V1 self<=30
M1 Max 30

E02_06. In the typical month that you use this lamp, how many hours do you use it each day? Hours per day

NUMERIC: DECIMAL   E02_06

E E02_01==1
V1 self<=24
M1 Max 24

E02_07. What don't you like most about using the %rostertitle%? Record up to 2 responses

MULTI-SELECT   E02_07
001 ☐ Lantern too expensive
002 ☐ Fuel too expensive
003 ☐ Fuel not available
004 ☐ Accidents can happen
005 ☐ Bad for health
006 ☐ Its not bright enough
007 ☐ Bad smell and smoke
008 ☐ Accident to fire hazard
555 ☐ Other, specify
777 ☐ No problems

E E02_01==1

E02_07Other. Other(Specify)

TEXT   E02_07Other

E E02_07.Contains(555)

E02_08a. In the typical month that you use the above lamps, how many liters or gallon of diesel do you use to light these lamps? Amount

NUMERIC: INTEGER   E02_08a

E E02_01==1 && (@rowcode==1 || @rowcode==2)

E02_08b. In the typical month that you use the above lamps, how many liters or gallon of diesel do you use to light these lamps?

SINGLE-SELECT   E02_08b
01 ◯ Liter
02 ◯ Gallon

E E02_01==1 && (@rowcode==1 || @rowcode==2)

E02_09. In the typical month that you use the above lamps, how much does you household spend per month for diesel that you use to light these lamps? _____ Kyats

NUMERIC: INTEGER   E02_09

E E02_08a>0

STATIC TEXT

Instruction : All candle, kerosene/diesel lamp and biogas lamp users must answer E15 and E16

E02_10. What is the main source of lighting the children who are currently enrolled in school usually use for studying/doing homework? Single response

SINGLE-SELECT   E02_10
001 ◯ Electric lighting/lamp
002 ◯ Solar powered light source
003 ◯ Battery-operated light source
004 ◯ Street lighting
005 ◯ kerosene/diesel lamp
006 ◯ Candles
007 ◯ Biogas lamps
555 ◯ Other, specify

	777 ⭕ Studying and homework only during daylight hours
E02_10Other. Other, specify E E02_10==555	TEXT E02 10Other ....
E02_11. In the last 12 months, what type of harm/injury did any household members have from [LAMP/ CANDLE]? Multiple responses possible	MULTI-SELECT E02 11 001 ☐ Death or permanent limb damage 002 ☐ Burns/fire 003 ☐ Poisoning 004 ☐ Eye problems 005 ☐ Respiratory problem 006 ☐ Other major injury 007 ☐ Minor injury 008 ☐ Fire with no injury 777 ☐ None

F. USE OF DRY CELL BATTERIES (SIZE D, AA, AAA AND OTHER SIZES)

Fresp1 Enumerator: Record Respondent ID for this section	SINGLE-SELECT: LINKED Fresp1

F. USE OF DRY CELL BATTERIES (SIZE D, AA, AAA AND OTHER SIZES)
F.1 PRODUCTS USING DRY CELL BATTERY

F. USE OF DRY CELL BATTERIES (SIZE D, AA, AAA AND OTHER SIZES) / F.1 PRODUCTS USING DRY CELL BATTERY
Roster: PRODUCTS USING DRY CELL BATTERY
generated by fixed list   F1_DryCellBatteryProduct

001   a) Lantern

002   b) Lamp

003   c) Flash light/Tourch light

004   d) Radio

555   e) Other specify....

F01_01. In the last 12 months, did you use dry cell batteries for to power any of the %rostertitle% ?	SINGLE-SELECT F01_01 01 ⭕ Yes 02 ⭕ No
Other specify E F01_01==1 && @rowcode==555	TEXT F01_01Other ....
F01_02. How much do you pay for %rostertitle%? E F01_01==1	NUMERIC: INTEGER F01_02 -------------------------------------
F01_03. In the month that you use, how many do you use? Number of %rostertitle% E F01_01==1	NUMERIC: INTEGER F01 03 -------------------------------------
F01_04. In the month that you use, how many hours do you use each them per day? (more than one add hours of all devices used)	NUMERIC: INTEGER F01 04 -------------------------------------

_____Hours

F01_05. Do you use it as a regular source of lighting or as the backup when main source is not available?	SINGLE-SELECT	F01_05
	01 ○ Use it as the main source of lighting/radio	
	02 ○ Use as backup source of lighting/radio	

E F01_01==1

F. USE OF DRY CELL BATTERIES (SIZE D, AA, AAA AND OTHER SIZES)
F.2 DRY CELL BATTERY USAGE

F. USE OF DRY CELL BATTERIES (SIZE D, AA, AAA AND OTHER SIZES) / F.2 DRY CELL BATTERY USAGE
Roster: DRY CELL BATTERY USAGE
generated by fixed list   F2_DryCellBatteryUsage

001   D-Size

002   AA -Size

003   AAA -Size

555   Other size…………

F02_01. In the month that you use the above devices, how many %rostertitle% dry cell batteries do you use per month number of batteries per month	NUMERIC: INTEGER	F02_01

Other specify	TEXT	F02_01Other

E F02_01>=1 && @rowcode==555

F02_02. Price per unit %rostertitle%	NUMERIC: INTEGER	F02_02

E F02_01>=1

F02_03. Total spending on %rostertitle% dry-cell per month	NUMERIC: INTEGER	F02_03

E F02_01>=1

G. HOUSEHOLD FUEL CONSUMPTION

STATIC TEXT

Respondent should be household member who most frequently cooks food for the household. First ask H.3 for all fuel types and then record the information in the following questions only for the fuel that is used.

Gresp1 Enumerator: Record Respondent ID for this section	SINGLE-SELECT: LINKED	Gresp1

G. HOUSEHOLD FUEL CONSUMPTION
G.1 LPG

STATIC TEXT

During the past 12 months, has your household used LPG for any of the following purposes?

G01_01a. Cooking	SINGLE-SELECT	G01_01a

	01 ○ Yes 02 ○ No
G01_01b. Boiling	SINGLE-SELECT G01_01b 01 ○ Yes 02 ○ No
G01_01c. Other (specify)	SINGLE-SELECT G01_01c 01 ○ Yes 02 ○ No
G01_01cOther. Other (specify) E G01_01c==1	TEXT G01_01cOther ....
G01_01d. Business activity	SINGLE-SELECT G01_01d 01 ○ Yes 02 ○ No

STATIC TEXT

LPG: MONTHLY EXPENDITURES AND QUANTITY USED If answered "NO' to questions (G01_01a to G01_01d), Go to G.2

G01_02. In a typical purchase, how many Viss of LPG does your household usually purchase (LOCAL UNITS)? _____ Viss E G01_01a==1 || G01_01b==1 || G01_01c==1 || G01_01d==1	NUMERIC: INTEGER G01_02 -----------------------------
G01_03. What was the cost of LPG for the typical purchase? E G01_01a==1 || G01_01b==1 || G01_01c==1 || G01_01d==1	NUMERIC: INTEGER G01_03 -----------------------------
G01_04. How many days does the LPG that you usually purchase in a typical purchase last? E G01_01a==1 || G01_01b==1 || G01_01c==1 || G01_01d==1	NUMERIC: INTEGER G01_04 -----------------------------
G01_05. How many Viss of LPG does your household usually use in a month? _____ No. of Viss of LPG/month E G01_01a==1 || G01_01b==1 || G01_01c==1 || G01_01d==1	NUMERIC: INTEGER G01_05 -----------------------------
G01_06. On an average, how much does your household spend on LPG per month? _____ Kyats/Month E G01_01a==1 || G01_01b==1 || G01_01c==1 || G01_01d==1	NUMERIC: INTEGER G01_06 -----------------------------

G. HOUSEHOLD FUEL CONSUMPTION
G.2 CHARCOAL

STATIC TEXT

INFORMATION ON CHARCOAL USAGE During the past 12 months, has your household use charcoal for any of the following purposes?

G02_01a. Cooking	SINGLE-SELECT G02_01a 01 ○ Yes 02 ○ No
G02_01b. Boiling Water (for consumption)	SINGLE-SELECT G02_01b 01 ○ Yes 02 ○ No

G02_01c. Heating Water (for bathing, washing, and similar activities)	SINGLE-SELECT G02_01c 01 ◯ Yes 02 ◯ No
G02_01d. Space Heating	SINGLE-SELECT G02_01d 01 ◯ Yes 02 ◯ No
G02_01e. Other (specify)	SINGLE-SELECT G02_01e 01 ◯ Yes 02 ◯ No
G02_01eOther. Other (specify) E G02_01e==1	TEXT G02_01eOther ....
G02_01f. Business Activities	SINGLE-SELECT G02_01f 01 ◯ Yes 02 ◯ No
G02_02. In a typical purchase, how many LOCAL UNITS of charcoal does your household usually purchase? E G02_01a==1 || G02_01b==1 || G02_01c==1 || G02_01d==1 || G02_01e==1 || G02_01f==1	NUMERIC: INTEGER G02_02 -------------------------------
G02_03. In the typical purchase, how much does it cost? E G02_01a==1 || G02_01b==1 || G02_01c==1 || G02_01d==1 || G02_01e==1 || G02_01f==1	NUMERIC: INTEGER G02_03 -------------------------------
G02_04. How many days does it lasts? E G02_01a==1 || G02_01b==1 || G02_01c==1 || G02_01d==1 || G02_01e==1 || G02_01f==1	NUMERIC: INTEGER G02_04 -------------------------------
G02_05. On an average, how many Viss of charcoal do you use in a month? _____ Viss/Month E G02_01a==1 || G02_01b==1 || G02_01c==1 || G02_01d==1 || G02_01e==1 || G02_01f==1	NUMERIC: INTEGER G02_05 -------------------------------
G02_06. On an average, how much does your household spend on charcoal per month? _____ Kyts/Month E G02_01a==1 || G02_01b==1 || G02_01c==1 || G02_01d==1 || G02_01e==1 || G02_01f==1	NUMERIC: INTEGER G02_06 -------------------------------

G. HOUSEHOLD FUEL CONSUMPTION
G.3 FIREWOOD

STATIC TEXT

INFORMATION ON FIREWOOD AND/OR CROP RESIDUE USAGE During the past 12 months, does your household use FIREWOOD for any of the following purposes?

G03_01a. Cooking	SINGLE-SELECT G03_01a 01 ◯ Yes 02 ◯ No
G03_01b. Boiling Water (for consumption)	SINGLE-SELECT G03_01b

	01 ◯ Yes
	02 ◯ No

G03_01c. Heating Water (for bathing, washing, and similar activities)	SINGLE-SELECT G03_01c 01 ◯ Yes 02 ◯ No
G03_01d. Space Heating	SINGLE-SELECT G03_01d 01 ◯ Yes 02 ◯ No
G03_01e. Other (specify)	SINGLE-SELECT G03_01e 01 ◯ Yes 02 ◯ No
G03_01eOther. Other (specify) E G03_01e==1	TEXT G03_01eOther ....
G03_01f. Business Activities	SINGLE-SELECT G03_01f 01 ◯ Yes 02 ◯ No
G03_02. How does your household obtain firewood to use at home? E G03_01a==1 || G03_01b==1 || G03_01c==1 || G03_01d==1 || G03_01e==1 || G03_01f==1	SINGLE-SELECT G03_02 01 ◯ Collect Only 02 ◯ Purchase Only 03 ◯ Purchase and Collect

G. HOUSEHOLD FUEL CONSUMPTION / G.3 FIREWOOD
G.3.A PURCHASE OF FIREWOOD

E G03_02==2 \|\| G03_02==3

G03a01. In a typical purchase, how many Viss of firewood does your household usually purchase?	NUMERIC: INTEGER G03a01 -------------------------------
G03a02. How much it costs?	NUMERIC: INTEGER G03a02 -------------------------------
G03a03. How many days does the typical purchase lasts?	NUMERIC: INTEGER G03a03 -------------------------------
G03a04. On an average, how much does your household spend on firewood per month?Days	NUMERIC: INTEGER G03a04 -------------------------------
G03a05. On average, how many Viss OF FIREWOOD does your household used per month?	NUMERIC: INTEGER G03a05 -------------------------------

G. HOUSEHOLD FUEL CONSUMPTION / G.3 FIREWOOD
G.3.B FIREWOOD COLLECTION

E G03_02==1 \|\| G03_02==3

G03b02. In a typical collection, what is the AVERAGE WEIGHT does your household usually collect?	NUMERIC: INTEGER G03b02 -------------------------------

G03b03. How many total days does the typical collection of firewood last?	NUMERIC: INTEGER	G03b03

G03b04. How many Viss of firewood that your household collects are used in a month? _____ Units/Month	NUMERIC: INTEGER	G03b04

G. HOUSEHOLD FUEL CONSUMPTION
G.4 CROP RESIDUE OR AGRICULTURAL WASTE

G04_01. How does your household obtain crop residue or agricultural waste to use at home?	SINGLE-SELECT	G04_01
	01 ⭕ Collect Only 02 ⭕ Purchase Only 03 ⭕ Purchase and Collect 04 ⭕ Other specify 05 ⭕ Do not use	

G. HOUSEHOLD FUEL CONSUMPTION / G.4 CROP RESIDUE OR AGRICULTURAL WASTE
G.4.A PURCHASE OF CROP RESIDUE OR AGRICULTURAL WASTE
E G04_01==2 || G04_01==3

G04a01. In a typical purchase, how many LOCAL UNITS of CROP RESIDUE does your household usually purchase? (if respondet collects in other type of unit other than viss, probe respondent to give estimate of weight) _____Viss	NUMERIC: INTEGER	G04a01

G04a02. How much it costs? _____Kyats	NUMERIC: INTEGER	G04a02

G04a03. How many days does the typical purchase lasts? _____Days	NUMERIC: INTEGER	G04a03

G04a04. On average, how much does your household spend on crop residue per month? _____ KYATS./month (Enter average spending per month, or "0" if it is already included in spending for firewood"	NUMERIC: INTEGER	G04a04

G04a05. On average, how many Viss OF crop residue does your household used per month? _____ Units/Month	NUMERIC: INTEGER	G04a05

G. HOUSEHOLD FUEL CONSUMPTION / G.4 CROP RESIDUE OR AGRICULTURAL WASTE
G.4.B CROP RESIDUE OR AGRICULTURAL WASTE COLLECTION
E G04_01==1 || G04_01==3

G04b01. In addition to firewood, does your household COLLECT agricultural waste/residue to use as fuel?	SINGLE-SELECT	G04b01
	01 ⭕ Yes 02 ⭕ No	
G04b02. Agricultural waste/crop residue that you collect is usually used	SINGLE-SELECT	G04b02
	001 ⭕ As main fuel	

	002 ○ To supplement firewood
	003 ○ To start fire
	555 ○ Other, specify_____

G04b02Other. Other (specify)	TEXT G04b02Other
E G04b02==555	....

G.5 BIOMASS BRIQUETTE

STATIC TEXT

INFORMATION ON BIOMASS BRIQUETTE USAGE During the past 12 months, has your household use biomass briquette for any of the following purposes?

G05_01a. Cooking	SINGLE-SELECT G05_01a
	01 ○ Yes
	02 ○ No
G05_01b. Boiling Water (for consumption)	SINGLE-SELECT G05_01b
	01 ○ Yes
	02 ○ No
G05_01c. Heating Water (for bathing, washing, and similar activities)	SINGLE-SELECT G05_01c
	01 ○ Yes
	02 ○ No
G05_01d. Space Heating	SINGLE-SELECT G05_01d
	01 ○ Yes
	02 ○ No
G05_01e. Other (specify)	SINGLE-SELECT G05_01e
	01 ○ Yes
	02 ○ No
G05_01eOther. Other Specify	TEXT G05_01eOther
E G05_01e==1	....
G05_01f. Business Activities	SINGLE-SELECT G05_01f
	01 ○ Yes
	02 ○ No
G05_02. In a typical purchase, how many Viss of biomass briquette does your household usually purchase?	NUMERIC: INTEGER G05_02
E G05_01a==1 || G05_01b==1 || G05_01c==1 || G05_01d==1 || G05_01e==1 || G05_01f==1	--------------------------------
G05_03. In the typical purchase, how much does it cost?	NUMERIC: INTEGER G05_03
E G05_01a==1 || G05_01b==1 || G05_01c==1 || G05_01d==1 || G05_01e==1 || G05_01f==1	--------------------------------
G05_04. How many days does it lasts?	NUMERIC: INTEGER G05_04
E G05_01a==1 || G05_01b==1 || G05_01c==1 || G05_01d==1 || G05_01e==1 || G05_01f==1	--------------------------------
G05_05. On an average, how many Viss of biomass briquette do you use in a month?	NUMERIC: INTEGER G05_05
E G05_01a==1 || G05_01b==1 || G05_01c==1 || G05_01d==1 ||	--------------------------------

```
G05_01e==1 || G05_01f==1
```

G05_06. On an average, how much does your household spend on biomass briquette per month?	NUMERIC: INTEGER	G05_06

E `G05_01a==1 || G05_01b==1 || G05_01c==1 || G05_01d==1 || G05_01e==1 || G05_01f==1`

G. HOUSEHOLD FUEL CONSUMPTION
G.6 COAL BRIQUETTE

STATIC TEXT

INFORMATION ON COAL BRIQUETTE USAGE During the past 12 months, has your household use coal briquette for any of the following purposes?

G06_01a. Cooking	SINGLE-SELECT G06_01a 01 ◯ Yes 02 ◯ No

G06_01b. Boiling Water (for consumption)	SINGLE-SELECT G06_01b 01 ◯ Yes 02 ◯ No

G06_01c. Heating Water (for bathing, washing, and similar activities)	SINGLE-SELECT G06_01c 01 ◯ Yes 02 ◯ No

G06_01d. Space Heating	SINGLE-SELECT G06_01d 01 ◯ Yes 02 ◯ No

G06_01e. Other (specify)	SINGLE-SELECT G06_01e 01 ◯ Yes 02 ◯ No

G06_01eOther. Other Specify	TEXT G06_01eOther

E `G06_01e==1`

G06_01f. Business Activities	SINGLE-SELECT G06_01f 01 ◯ Yes 02 ◯ No

G06_02. In a typical purchase, how many LOCAL UNITS of coal briquette does your household usually purchase?	NUMERIC: INTEGER G06_02

E `G06_01a==1 || G06_01b==1 || G06_01c==1 || G06_01d==1 || G06_01e==1 || G06_01f==1`

G06_03. In the typical purchase, how much does it cost?	NUMERIC: INTEGER G06_03

E `G06_01a==1 || G06_01b==1 || G06_01c==1 || G06_01d==1 || G06_01e==1 || G06_01f==1`

G06_04. How many days does it lasts?	NUMERIC: INTEGER G06_04

E `G06_01a==1 || G06_01b==1 || G06_01c==1 || G06_01d==1 || G06_01e==1 || G06_01f==1`

G06_05. On an average, how many UNITS of coal briquette does your use in a month?	NUMERIC: INTEGER G06_05

E	G06_01a==1 || G06_01b==1 || G06_01c==1 || G06_01d==1 || G06_01e==1 || G06_01f==1	

G06_06. On an average, how much does your house spend on coal briquette per month?	NUMERIC: INTEGER	G06_06
E G06_01a==1 || G06_01b==1 || G06_01c==1 || G06_01d==1 || G06_01e==1 || G06_01f==1		

G. HOUSEHOLD FUEL CONSUMPTION
G.7 ELECTRICITY FOR COOKING

STATIC TEXT

INFORMATION ON ELECTRICITY USAGE During the past 12 months, has your household used electricity and electric cooking appliance(s) for any of the following purposes?

G07_01a. Electric hot plate or stove/oven to Cook Food	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	G07_01a
G07_01b. Electric hot plate or stove/oven to Boil Water	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	G07_01b
G07_01c. Use Electric Rice Cooker to Cook Rice	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	G07_01c
G07_01d. Use electric kettle/electric hot water dispenser to boil water	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	G07_01d
G07_01e. Use electric hot pot/wok to cook food	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	G07_01e
G07_01f. Other (specify)	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	G07_01f
G07_01fOther. Other Specify	TEXT	G07_01fOther
E G07_01f==1		

H. COOKING AND HEATING SOLUTIONS

STATIC TEXT

Instructions: The respondent should be the household member who most frequently cooks food for the household, as identified in A.12

H. COOKING AND HEATING SOLUTIONS
H.1 ABOUT COOK STOVES USING AT HOME

H. COOKING AND HEATING SOLUTIONS / H.1 ABOUT COOK STOVES USING AT HOME
Roster: COOK STOVE USING AT HOME
generated by fixed list   H1A_UseCookStove

01	1. 3/5 Stones Stove
02	2. Fixed or Self Made Stove
03	3. Ceramic Stove
04	4. Ceramic Stove (in metal bucket)
05	5. Traditional metal stove
06	6. Metal Stove
07	7. New Metal Stove
08	8. Carved stone stove
09	9. Rice Husk Stove
10	10. Electric hot plate or Electric Stove
11	11. LPG Stove

H01_01a. In the last 12 months, %rostertitle% did your household use for only preparing meals?

SINGLE-SELECT   H01_01a

01 ◯ Yes
02 ◯ No

H01_01b. How many of %rostertitle% type of cookstove are you currently using?

E   H01_01a==1
V1   self>0
M1   No zero

NUMERIC: INTEGER   H01_01b

H. COOKING AND HEATING SOLUTIONS / H.1 ABOUT COOK STOVES USING AT HOME / COOK STOVE USING AT HOME

Roster: COOKESTOVE DETAIL
generated by numeric question H01_01b   H1B_UseCookStoveDetail

---

H01_02. How long (in months) have you been using this type of cookstove?
_____Months

NUMERIC: INTEGER   H01_02

H01_02_a. In the last 12 months, during which of the following months did you use %rostertitle%?

MULTI-SELECT   H01_02_a

01 ☐ January (ပြာသို - ဆောင်း)
02 ☐ February (တပို့တွဲ - ဆောင်း)
03 ☐ March (တပေါင်း - နွေ)
04 ☐ April (တန်ခူး - နွေ)
05 ☐ May (ကဆုန် - နွေ)
06 ☐ June (နယုန် - မိုး)
07 ☐ July (ဝါဆို - မိုး)
08 ☐ August (ဝါခေါင် - မိုး)
09 ☐ September (တော်သလင်း - မိုး)
10 ☐ October (သီတင်းကျွတ် - မိုး)
11 ☐ November (တန်ဆောင်မုန်း - ဆောင်း)
12 ☐ December (နတ်တော် - ဆောင်း)
13 ☐ All year round

H01_02_b. Is the [STOVE] fixed in one place or moveable?

SINGLE-SELECT   H01_02_b

01 ◯ fixed in one place
02 ◯ moveable

H01_03. How much did you pay for this stove? Enter 0if it is given to you free of charge
_____ Kyats

NUMERIC: INTEGER   H01_03

H01_03_a. Who gave %rostertitle% cookstove to you?

MULTI-SELECT   H01_03_a

E `H01_03==0`	001 ☐ Local private organizations (NGO)
	002 ☐ International non-government organizations (INGO)
	003 ☐ Chief of village
	004 ☐ Local government
	005 ☐ Friend/Relatives
	888 ☐ Don't know
	555 ☐ Others, specify

H01_03_aOther. Other(Specify)

E `H01_03_a.Contains(555)`

TEXT   H01_03_aOther

···

H01_03_b. Did you receive training or information on %rostertitle%?

SINGLE-SELECT   H01_03_b
01 ◯ Yes
02 ◯ No

H01_04. How many burners does this stove have? Number of Burners_____

NUMERIC: INTEGER   H01_04

H01_05. Where do you cook your meals with this cookstove?

SINGLE-SELECT   H01_05
001 ◯ In the kitchen separated from living area
002 ◯ In the kitchen connected to the living area
003 ◯ In a separate dwelling
004 ◯ In a veranda (roofed platform with at least two open sides)
005 ◯ Outdoors
555 ◯ Other, specify

H01_05Other. Other(Specify)

E `H01_05==555`

TEXT   H01_05Other

···

H01_06. Do you use a chimney, or hood, or other exhaust system while using this stove?

E `H01_05.InList(1,2,3,555)`

SINGLE-SELECT   H01_06
01 ◯ Yes
02 ◯ No

H01_07. Do you regularly clean a chimney, hood or other exhaust system?

E `H01_06==1`

SINGLE-SELECT   H01_07
01 ◯ Yes
02 ◯ No

H01_08. How much time do household members spend preparing the [STOVE] and fuel for each meal on average [including setting up the fuel and turning on the stove but not including gathering fuel or cooking time]? Minutes

NUMERIC: INTEGER   H01_08

H01_09. In the last 7 days, on average, how many times did you light [STOVE] per day?

NUMERIC: INTEGER   H01_09

H01_10. In the last 7 days, how many days per week do you use this cookstove? Days/week

V1 `self<=7`
M1 Max 7

NUMERIC: INTEGER   H01_10

H01_11a. In the last 7 days, on average, how much time did your household use [STOVE] per

NUMERIC: INTEGER   H01_11a

----

day to cook or reheat meals (do not include boiling water) in the... Morning Minutes

V1 `self<1440`
M1 Cannot exceed 1,440 minutes per day

H01_11b. In the last 7 days, on average, how much time did your household use [STOVE] per day to cook or reheat meals (do not include boiling water) in the... Afternoon Minutes

NUMERIC: INTEGER   `H01_11b`

V1 `self<1440`
M1 Cannot exceed 1,440 minutes per day

H01_11c. In the last 7 days, on average, how much time did your household use [STOVE] per day to cook or reheat meals (do not include boiling water) in the... Evening Minutes

NUMERIC: INTEGER   `H01_11c`

V1 `self<1440`
M1 Cannot exceed 1,440 minutes per day

H01_11d. In the last 7 days, on average, how much time did your household use [STOVE] per day to boil water (for cooking, washing, and drinking)?

NUMERIC: INTEGER   `H01_11d`

V1 `self<1440`
M1 Cannot exceed 1,440 minutes per day (60*24)

H01_12. Do you also use this stove for space heating?

SINGLE-SELECT   `H01_12`
01 ◯ Yes
02 ◯ No

E `(@rowcode!=10 || @rowcode!=11)`

H01_13. During the last winter months, how many days do you use this stove for heating?

NUMERIC: INTEGER   `H01_13`

E `(@rowcode!=10 || @rowcode!=11) && H01_12==1`

H01_14. During the last winter months, how minutes per day did you use this stove for heating?

NUMERIC: INTEGER   `H01_14`

E `(@rowcode!=10 || @rowcode!=11) && H01_12==1`

H01_15. In the last 12 months, what type of harm/injury did your household face from this cookstove? Multiple responses possible.

MULTI-SELECT   `H01_15`
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

H01_16. Who decide to buy or replace the old one with this stove?

SINGLE-SELECT   `H01_16`
001 ◯ Wife
002 ◯ Husband
003 ◯ Both husband and wife
555 ◯ Other(Specify)

H01_16Other. Other(Specify)

TEXT   `H01_16Other`

E `H01_16==555`

H01_17. Did you use this type of cookstove before?	SINGLE-SELECT H01_17 01 ◯ Yes 02 ◯ No
H01_18. How many months did your previous cookstove lasts? Months E H01_17==1	NUMERIC: INTEGER H01_18 -

STATIC TEXT

Ask each question for the most used and second most used fuel for this cookstove as identified in H1 1 to 9 If no second fuel, only ask about the most used fuel. a. Most used b. Second most used

H01_19a. [Most used] In the last 12 months, what are the fuels you used on [STOVE]?	SINGLE-SELECT H01_19a 01 ◯ Wood purchased 02 ◯ Wood collected 03 ◯ Charcoal 04 ◯ Solar 05 ◯ Kerosene 06 ◯ Piped Natural Gas 07 ◯ Coal/Ignite 08 ◯ Animal Waste/Dung 09 ◯ Crop residue/Plant Biomass 10 ◯ Saw dust 11 ◯ Coal Briquette 12 ◯ Biomass briquette 13 ◯ Electric 14 ◯ Pellets/Woodchips (processed biomass) 15 ◯ Biogas 16 ◯ Ethanol And 2 other [8]
H01_19aOther. Other(Specify) E H01_19a==555	TEXT H01_19aOther ··
H01_19b. [Second Most used] In the last 12 months, what are the fuels you used on [STOVE]? E H01_19a!= 4 || H01_19a!= 6 || H01_19a!= 13 || H01_19a!= 15	SINGLE-SELECT H01_19b 001 ◯ Wood purchased 002 ◯ Wood collected 003 ◯ Charcoal 004 ◯ Solar 005 ◯ Kerosene 006 ◯ Piped Natural Gas 007 ◯ Coal/Ignite 008 ◯ Animal Waste/Dung 009 ◯ Crop residue/Plant Biomass 010 ◯ Saw dust 011 ◯ Coal Briquette 012 ◯ Biomass briquette 013 ◯ Electric 014 ◯ Pellets/Woodchips (processed biomass) 015 ◯ Biogas 016 ◯ Ethanol And 3 other [9]
H01_19bOther. Other(Specify) E H01_19b==555	TEXT H01_19bOther ··
Is this [stove] main cook stove?	SINGLE-SELECT H01_19c 01 ◯ Yes 02 ◯ No

H02_08a. How much do you spend on the [FUEL TYPE] for this stove in the last month/in a typical month when you use the stove? Enter the actual amount spent, not the market value of the fuel. a. Most used Amount in Local Currency	NUMERIC: INTEGER H02_08a -------------------------------
E H01_19c==1	
H02_08b. How much do you spend on the [FUEL TYPE] for this stove in the last month/in a typical month when you use the stove? Enter the actual amount spent, not the market value of the fuel. b. Second most used Amount in Local Currency	NUMERIC: INTEGER H02_08b -------------------------------
E H01_19c==1	
H01_19d. Why do you not use [STOVE] most of the time?	MULTI-SELECT H01_19d 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 ☐ Too expensive or often not available 010 ☐ Certain type of meals taste better with another stove 555 ☐ Other, specify
E H01_19c==2	
H01_19dOther. Other(Specify)	TEXT H01_19dOther ....
E H01_19d.Contains(555)	

H. COOKING AND HEATING SOLUTIONS / H.1 ABOUT COOK STOVES USING AT HOME / COOK STOVE USING AT HOME / COOKESTOVE DETAIL

H.2 MAIN COOK STOVE

E H01_19c==1

H02_01. Enumerator: based on responses to I.15 and I.18 does the HH use any solid fuels indoors?	SINGLE-SELECT H02_01 001 ◯ Yes 002 ◯ No 888 ◯ Don't Know
H02_02. Record the rough shape of the cooking space	SINGLE-SELECT H02_02 01 ◯ Roughly square 02 ◯ Roughly rectangular 03 ◯ Roughly Circular 04 ◯ None of the above
H02_03a. Record the dimensions of the cooking space in heel-to-toe paces. Square, record one side |___| paces	NUMERIC: INTEGER H02_03a -------------------------------
E H02_02==1 V1 self>=2 && self<=20	

M1	between 2 and 20	

H02_03b1. Record the dimensions of the cooking space in heel-to-toe paces. Rectangle, record both sides 1. Length |____| paces

NUMERIC: INTEGER
H02_03b1

E `H02_02==2`
V1 `self>=2 && self<=20`
M1 between 2 and 20

H02_03b2. Record the dimensions of the cooking space in heel-to-toe paces. Rectangle, record both sides 2. Width |____| paces

NUMERIC: INTEGER
H02_03b2

E `H02_02==2`
V1 `self>=2 && self<=20`
M1 between 2 and 20

H02_03c. Record the dimensions of the cooking space in heel-to-toe paces. Circle, record diameter |____| paces

NUMERIC: INTEGER
H02_03c

E `H02_02==3`
V1 `self>=2 && self<=20`
M1 between 2 and 20

H02_03d. Record the dimensions of the cooking space in heel-to-toe paces.

TEXT
H02_03d

E `H02_02==4`

H02_04. Record the type of roof covering the cooking space

SINGLE-SELECT
H02_04

- 01 ◯ Flat
- 02 ◯ Roughly Conical
- 03 ◯ Gable (triangular cross-section)
- 04 ◯ None of the above
- 05 ◯ No roof covering

H02_05. Estimate the height of the highest point of the ceiling relative to your own height

SINGLE-SELECT
H02_05

- 01 ◯ Smaller than me
- 02 ◯ My height
- 03 ◯ 1.5 x my height
- 04 ◯ 2 x my height
- 05 ◯ More than 2 x my height

E `H02_04!=5`

H02_06. How many doors and windows (opening to the outside) does the cooking space have? Number of Openings

NUMERIC: INTEGER
H02_06

Photo. Can you show me the cookstove you spend the most time cooking on? This is the MAIN cookstove, take a picture of the stove and ask the following questions about only this cookstove. Record Cookstove ID from previous table

PICTURE
MainCookStove

Hresp1 Enumerator: Record Respondent ID for this section

SINGLE-SELECT: LINKED
Hresp1

H. COOKING AND HEATING SOLUTIONS
H.3 SPACE AND WATER HEATING

H03_01. Do you heat water for washing (either for washing dishes and clothes or for bathing)?	SINGLE-SELECT · H03_01 01 ◯ Yes 02 ◯ No
H03_02. What is the main source you use to heat water? Select one E `H03_01==1`	SINGLE-SELECT · H03_02 01 ◯ Electric kettle/coil 02 ◯ Electric stove 03 ◯ Electric shower 04 ◯ Gas stove 05 ◯ Same solid fuel stove used for cooking 06 ◯ Separate solid fuel stove
H03_03. What is the MAIN fuel you use in this stove? E `H03_01==1 && H03_02.InList(3,4,5)`	SINGLE-SELECT · H03_03 001 ◯ LPG/cooking gas 002 ◯ Wood purchased 003 ◯ Wood collected 004 ◯ Charcoal 006 ◯ Kerosene 007 ◯ Piped Natural Gas 008 ◯ Coal/lignite 009 ◯ Animal Waste/Dung 010 ◯ Crop Residue/Plant Biomass 011 ◯ Saw Dust 012 ◯ Coal Briquette 013 ◯ Biomass Briquette 014 ◯ Electric 015 ◯ Processed biomass (pellets)/ woodchips 016 ◯ Biogas 017 ◯ Ethanol And 3 other [6]
H03_03Other. Other(Specify) E `H03_03==555`	TEXT · H03_03Other ....
H03_04. Do you heat your house?	SINGLE-SELECT · H03_04 01 ◯ Yes 02 ◯ No
H03_05 What is the main source you use to heat your house? E `H03_04==1`	SINGLE-SELECT · H03_05 001 ◯ Electric heater 002 ◯ Same solid fuel stove used for cooking 003 ◯ Separate solid fuel stove 555 ◯ Other specify
H03_05Other. Other(Specify) E `H03_05==555`	TEXT · H03_05Other ....
H03_06. What is the MAIN fuel you use in this stove? E `H03_04==1 && H03_05.InList(2,3,555)`	SINGLE-SELECT · H03_06 001 ◯ LPG/cooking gas 002 ◯ Wood purchased 003 ◯ Wood collected 004 ◯ Charcoal 006 ◯ Kerosene 007 ◯ Piped Natural Gas 008 ◯ Coal/lignite 009 ◯ Animal Waste/Dung 010 ◯ Crop Residue/Plant Biomass 011 ◯ Saw Dust 012 ◯ Coal Briquette

	013 ⭕ Biomass Briquette
	014 ⭕ Electric
	015 ⭕ Processed biomass (pellets)/ woodchips
	016 ⭕ Biogas
	017 ⭕ Ethanol
	And [3 other \[7\]](#)

H03_06Other. Other(Specify)	TEXT	H03_06Other
E H03_06==555	··	

H. COOKING AND HEATING SOLUTIONS
H.4 WILLINGNESS TO PAY FOR AN IMPROVED COOKSTOVE

H04_01. CAPI/ Enumerator: Recall responses to Section H (HOUSEHOLD FUEL CONSUMPTION) and record the most frequently used fuel. If not sure, ask respondent. Read options aloud	SINGLE-SELECT	H04_01
	01 ⭕ HH uses more fuelwood or crop residues than charcoal	
	02 ⭕ HH uses more charcoal than fuelwood or crop residues	
	03 ⭕ HH does not use any solid biomass (no charcoal, fuelwood or crop residues)	

H04_02. Enumerator: Record Respondent ID for this section Individual ID from Household Roster	SINGLE-SELECT: LINKED	H04_02

H04_03. If there is a stove that use less fuel and emit less smoke than the stove that you are using now, are you interested in replacing it?	SINGLE-SELECT	H04_03
	01 ⭕ Yes	
	02 ⭕ No	
E H04_01.InList(1,2)		

H04_04. How much did you pay for the cook stove? MMK …………… If don't pay write "0".	NUMERIC: INTEGER	H04_04
E H04_01.InList(1,2)	- -	

H04_05. If you make your own, what is the cost for the material and labor cost (include household member in the cost more) MMK …………… If don't pay write "0".	NUMERIC: INTEGER	H04_05
E H04_01.InList(1,2)	- -	

H. COOKING AND HEATING SOLUTIONS / H.4 WILLINGNESS TO PAY FOR AN IMPROVED COOKSTOVE
H.4A WILLINESS TO PAY FOR COOK STOVE

E   H04_01.InList(1,2)

H. COOKING AND HEATING SOLUTIONS / H.4 WILLINGNESS TO PAY FOR AN IMPROVED COOKSTOVE / H.4A WILLINESS TO PAY FOR COOK STOVE
H.4A 100% PAYMENT

E   Quest.IRnd()>=0.666666667

H04a_01. Would you be willing to pay 36,000MMK for this stove? Cashdown	SINGLE-SELECT	H04a_01
	01 ⭕ Yes	
	02 ⭕ No	

H04a_03. Would you be willing to pay ${CF} for this stove? 6 Months Installment = 6,000MMK	SINGLE-SELECT	H04a_03
	01 ⭕ Yes	

per month	02 ⭘ No
E `H04a_01==2`	

H04a_04. If no, why not participate?

E `H04a_03==2`

SINGLE-SELECT — H04a_04

- 001 ⭘ Cannot afford the payment
- 002 ⭘ Do not need an improved cookstove
- 003 ⭘ Do not believe that new stove will use less fuel and smoke
- 004 ⭘ I don't have to buy fuel
- 005 ⭘ I can make my own stove
- 006 ⭘ I don't need to buy new stove
- 007 ⭘ Fuel for this stove is unreliable
- 555 ⭘ Other, specify

H04a_04Other. Other(Specify)

E `H04a_04==555`

TEXT — H04a_04Other

H04a_05. Would you be willing to pay ${CF} for this stove? 12 Months Installment = 3,000MMK per month

E `H04a_03==2`

SINGLE-SELECT — H04a_05

- 01 ⭘ Yes
- 02 ⭘ No

H04a_06. If no, why not participate?

E `H04a_05==2`

SINGLE-SELECT — H04a_06

- 001 ⭘ Cannot afford the payment
- 002 ⭘ Do not need an improved cookstove
- 003 ⭘ Do not believe that new stove will use less fuel and smoke
- 004 ⭘ I don't have to buy fuel
- 005 ⭘ I can make my own stove
- 006 ⭘ I don't need to buy new stove
- 007 ⭘ Fuel for this stove is unreliable
- 555 ⭘ Other, specify

H04a_06Other. Other(Specify)

E `H04a_06==555`

TEXT — H04a_06Other

H04a_07. Would you be willing to pay ${CF} for this stove? 24 Months Installment = 1,500MMK per month

E `H04a_05==2`

SINGLE-SELECT — H04a_07

- 01 ⭘ Yes
- 02 ⭘ No

H04a_08. If no, why not participate?

E `H04a_07==2`

SINGLE-SELECT — H04a_08

- 001 ⭘ Cannot afford the payment
- 002 ⭘ Do not need an improved cookstove
- 003 ⭘ Do not believe that new stove will use less fuel and smoke
- 004 ⭘ I don't have to buy fuel
- 005 ⭘ I can make my own stove
- 006 ⭘ I don't need to buy new stove
- 007 ⭘ Fuel for this stove is unreliable
- 555 ⭘ Other, specify

H. COOKING AND HEATING SOLUTIONS / H.4 WILLINGNESS TO PAY FOR AN IMPROVED COOKSTOVE / H.4A WILLINESS TO PAY FOR COOK STOVE

H.4B 66% PAYMENT

E `Quest.IRnd()>=0.333333333 && Quest.IRnd()<0.666666667`

SINGLE-SELECT — H04b_01

H04b_01. Would you be willing to pay 24,000MMK for this stove? Cashdown

01 ◯ Yes
02 ◯ No

H04b_03. Would you be willing to pay ${CF} for this stove? 6 Months Installment = 4,000MMK per month

E `H04b_01==2`

SINGLE-SELECT   H04b_03
01 ◯ Yes
02 ◯ No

H04b_04. If no, why not participate?

E `H04b_03==2`

SINGLE-SELECT   H04b_04
001 ◯ Cannot afford the payment
002 ◯ Do not need an improved cookstove
003 ◯ Do not believe that new stove will use less fuel and smoke
004 ◯ I don't have to buy fuel
005 ◯ I can make my own stove
006 ◯ I don't need to buy new stove
007 ◯ Fuel for this stove is unreliable
555 ◯ Other, specify

H04b_05. Would you be willing to pay ${CF} for this stove? 12 Months Installment = 2,000MMK per month

E `H04b_03==2`

SINGLE-SELECT   H04b_05
01 ◯ Yes
02 ◯ No

H04b_06. If no, why not participate?

E `H04b_05==2`

SINGLE-SELECT   H04b_06
001 ◯ Cannot afford the payment
002 ◯ Do not need an improved cookstove
003 ◯ Do not believe that new stove will use less fuel and smoke
004 ◯ I don't have to buy fuel
005 ◯ I can make my own stove
006 ◯ I don't need to buy new stove
007 ◯ Fuel for this stove is unreliable
555 ◯ Other, specify

H04b_07. Would you be willing to pay ${CF} for this stove? 24 Months Installment = 1,000MMK per month

E `H04b_05==2`

SINGLE-SELECT   H04b_07
01 ◯ Yes
02 ◯ No

H04b_08. If no, why not participate?

E `H04b_07==2`

SINGLE-SELECT   H04b_08
001 ◯ Cannot afford the payment
002 ◯ Do not need an improved cookstove
003 ◯ Do not believe that new stove will use less fuel and smoke
004 ◯ I don't have to buy fuel
005 ◯ I can make my own stove
006 ◯ I don't need to buy new stove
007 ◯ Fuel for this stove is unreliable
555 ◯ Other, specify

H04b_08Other. Other(Specify)

E `H04b_08==555`

TEXT   H04b_08Other

···

H. COOKING AND HEATING SOLUTIONS / H.4 WILLINGNESS TO PAY FOR AN IMPROVED COOKSTOVE / H.4A WILLINESS TO PAY FOR COOK STOVE
H.4C 33% PAYMENT

E `Quest.IRnd()<0.333333333`

H04c_01. Would you be willing to pay 12,000MMK for this stove? Cashdown	SINGLE-SELECT	H04c_01
	01 ◯ Yes 02 ◯ No	

H04c_03. Would you be willing to pay ${CF} for this stove? 6 Months Installment = 2,000MMK per month E H04c_01==2	SINGLE-SELECT	H04c_03
	01 ◯ Yes 02 ◯ No	

H04c_04. If no, why not participate? E H04c_03==2	SINGLE-SELECT	H04c_04
	001 ◯ Cannot afford the payment 002 ◯ Do not need an improved cookstove 003 ◯ Do not believe that new stove will use less fuel and smoke 004 ◯ I don't have to buy fuel 005 ◯ I can make my own stove 006 ◯ I don't need to buy new stove 007 ◯ Fuel for this stove is unreliable 555 ◯ Other, specify	

H04c_04Other. Other(Specify) E H04c_04==555	TEXT	H04c_04Other
	····················	

H04c_05. Would you be willing to pay ${CF} for this stove? 12 Months Installment = 1,000MMK per month E H04c_03==2	SINGLE-SELECT	H04c_05
	01 ◯ Yes 02 ◯ No	

H04c_06. If no, why not participate? E H04c_05==2	SINGLE-SELECT	H04c_06
	001 ◯ Cannot afford the payment 002 ◯ Do not need an improved cookstove 003 ◯ Do not believe that new stove will use less fuel and smoke 004 ◯ I don't have to buy fuel 005 ◯ I can make my own stove 006 ◯ I don't need to buy new stove 007 ◯ Fuel for this stove is unreliable 555 ◯ Other, specify	

H04c_06Other. Other(Specify) E H04c_06==555	TEXT	H04c_06Other
	····················	

H04c_07. Would you be willing to pay ${CF} for this stove? 24 Months Installment = 500MMK per month E H04c_05==2	SINGLE-SELECT	H04c_07
	01 ◯ Yes 02 ◯ No	

H04c_08. If no, why not participate? E H04c_07==2	SINGLE-SELECT	H04c_08
	001 ◯ Cannot afford the payment 002 ◯ Do not need an improved cookstove 003 ◯ Do not believe that new stove will use less fuel and smoke 004 ◯ I don't have to buy fuel 005 ◯ I can make my own stove 006 ◯ I don't need to buy new stove 007 ◯ Fuel for this stove is unreliable 555 ◯ Other, specify	

H04c_08Other. Other(Specify)	TEXT	H04c_08Other
E H04c_08==555	....	

I. CONSUMPTION / EXPENDITURE

STATIC TEXT

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

Iresp1 Enumerator: Record Respondent ID for this section	SINGLE-SELECT: LINKED	Iresp1

I. CONSUMPTION / EXPENDITURE
I.1 FOOD, BEVERAGES AND TOBACCO EXPENDITURE IN THE PAST 7 DAYS

STATIC TEXT

Value of Consumption (local currency) during last 7 days

I01_01. Cereals & cereal products (e.g.: rice, maize, wheat, flour, millet) and starchy staples (e.g.: cassava, plantain, yam, cocoyam) Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER	I01_01
I01_02. Pulses & nuts (e.g.: beans, groundnuts, palm nuts, soy beans) Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER	I01_02
I01_03. Milk & milk products (e.g.: powder, tinned, fresh, cowbell) Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER	I01_03
I01_04. Edible oil (e.g.: palm oil, groundnut oil, coconut oil) Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER	I01_04
I01_05. Vegetables (e.g.: okra, tomato, onion, carrot, cabbage, garden egg) and Fruits (e.g.: bananas, coconut, pineapple, mango, orange, pawpaw) Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER	I01_05
I01_06. Egg, fish (smoked/fresh), meat, & poultry Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER	I01_06
I01_07. Sugar Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER	I01_07
I01_08. Other food items (e,g, pepper, salt, spices, butter, jam, bread, groundnut paste, processed foods, etc.) Include all processed foods not prepared by household using raw	NUMERIC: INTEGER	I01_08

ingredients Value of Consumption (local currency) during last 7 day -888=Don't know	
I01_09. Meals/food bought outside home Include any meals purchased from outside that are not prepared by the household Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER I01_09 ---
I01_10. Beverages (e.g.: malt drinks, minerals, coffee/Lipton/Milo) Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER I01_10 ---
I01_11. Alcohol, tobacco and cigarettes Value of Consumption (local currency) during last 7 day -888=Don't know	NUMERIC: INTEGER I01_11 ---

I. CONSUMPTION / EXPENDITURE
I.2 REGULAR NON-FOOD EXPENDITURE IN THE PAST 30 DAYS

STATIC TEXT

Value of Expenditure (local currency) during last 30 days -888=Don't know

I02_01. Medical/pharmacy expenses (e.g.: tablets/syrups, insecticide, condoms, pharmacy/chemist, traditional/herbal medicine) Value of Expenditure (local currency) during last 30 days -888=Don't know	NUMERIC: INTEGER I02_01 ---
I02_02. Soaps, disinfectants and cleaning supplies; cosmetics and toiletries Value of Expenditure (local currency) during last 30 days -888=Don't know	NUMERIC: INTEGER I02_02 ---
I02_03. Water supply for drinking and other uses (tanker services, pipe-borne, metered, bore-hole, well, purchased water) Value of Expenditure (local currency) during last 30 days -888=Don't know	NUMERIC: INTEGER I02_03 ---
I02_04. Mobile phone top-up Value of Expenditure (local currency) during last 30 days -888=Don't know	NUMERIC: INTEGER I02_04 ---
I02_05. Internet, land phone, dish, cable, and other household communication Value of Expenditure (local currency) during last 30 days -888=Don't know	NUMERIC: INTEGER I02_05 ---
I02_06. House Rent Value of Expenditure (local currency) during last 30 days -888=Don't know	NUMERIC: INTEGER I02_06 ---
I02_07. Transportation costs (fuel for own vehicles, cost of public transportation, buses, taxis) Value of Expenditure (local currency) during last 30 days -888=Don't know	NUMERIC: INTEGER I02_07 ---

I02_08. Other recurring monthly expenditure (wage of domestic workers, entertainment, etc.) Value of Expenditure (local currency) during last 30 days -888=Don't know	NUMERIC: INTEGER	I02_08

I. CONSUMPTION / EXPENDITURE
I.3 OTHER NON-FOOD EXPENDITURE IN THE PAST 12 MONTHS

STATIC TEXT

Value of Expenditure (local currency) during the last 12 months -888=Don't know

I03_01. School fees and other educational expenses Include uniform, PTA dues, books, tutor, school supplies, transport, food, etc. Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03_01
I03_02. SClothing, shoes, and accessories Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03_02
I03_03. Celebrations (e.g. funerals and expenses, weddings, festivals, naming ceremony, engagement) Only include costs to host celebration or to give donations/gifts for attending celebrations. Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03_03
I03_04. Gifts and donations (e.g.: donation to church made by the household, tithes) Only include gifts and donations not already included in L.22 Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03_04
I03_05. Hospital/Doctor visits and Diagnostic tests (e.g.: consultations at private hospital, public hospital, traditional healer) Do not include costs paid for by insurance Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03_05
I03_06. Furniture (e.g.: mattresses, room furniture, furnishing items, floor mats, carpets) Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03_06
I03_07. Repair, maintenance, and building (e.g.: cement, roofing, paint, carpentry, labor for repairs, sewerage removal) Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03_07
I03_08. Utensils & kitchen equipment (e.g.: cups, plates, cutleries, cooking pots, buckets) Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03_08

I03_09. Electronics: 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 Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03 09
I03_10. Appliances & tools (e.g.: electric iron, electric fans, refrigerators, lanterns, brooms) Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03 10
I03_11. Vehicles & motorcycle & bicycle (purchase or repair of own car/moto/ car battery) Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03 11
I03_12. Remittance sent to family members and relatives Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03 12
I03_13. Losses due to theft, robbery, accidents, natural disasters, etc. Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03 13
I03_14 Other major expenses not yet covered (specify) Value of Expenditure (local currency) during the last 12 months -888=Don't know	NUMERIC: INTEGER	I03 14

J. LAND OWNERSHIP, OTHER ASSETS AND BUSINESS AT HOME

Jresp1 Enumerator: Record Respondent ID for this section	SINGLE-SELECT: LINKED	Jresp1

J. LAND OWNERSHIP, OTHER ASSETS AND BUSINESS AT HOME
J.1 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.

J01_01a. Do you own Agricultural land ?	SINGLE-SELECT 01 ◯ Yes 02 ◯ No	J01_01a
J01_01b1. What is the total size of the land? E J01_01a==1	NUMERIC: DECIMAL	J01_01b1
J01_01b2. Unit E J01_01a==1	SINGLE-SELECT 03 ◯ Acre 04 ◯ Square fifth	J01_01b2
J01_01c. If you were to sell, what is the total	NUMERIC: INTEGER	J01_01c

value? Local currency I ကျပ်သိန်း ဂဏန်းဖြင့် ဖော်ပြပါ။ E J01_01a==1	------------------------------

J01_02a. Do you own Homestead land ?	SINGLE-SELECT J01_02a 01 ◯ Yes 02 ◯ No

J01_02b1. What is the total size of the land? E J01_02a==1	NUMERIC: DECIMAL J01_02b1 ------------------------------

J01_02b2. Unit E J01_02a==1	SINGLE-SELECT J01_02b2 03 ◯ Acre 04 ◯ Square fifth

J01_02c. If you were to sell, what is the total value? Local currency I ကျပ်သိန်း ဂဏန်းဖြင့် ဖော်ပြပါ။ E J01_02a==1	NUMERIC: INTEGER J01_02c ------------------------------

J01_03a. Do you own Non-agricultural land ?	SINGLE-SELECT J01_03a 01 ◯ Yes 02 ◯ No

J01_03b1. What is the total size of the land? E J01_03a==1	NUMERIC: DECIMAL J01_03b1 ------------------------------

J01_03b2. Unit E J01_03a==1	SINGLE-SELECT J01_03b2 03 ◯ Acre 04 ◯ Square fifth

J01_03c. If you were to sell, what is the total value? Local currency E J01_03a==1	NUMERIC: INTEGER J01_03c ------------------------------

J01_04a. Do you own All buildings, structures, shops, warehouse, etc?	SINGLE-SELECT J01_04a 01 ◯ Yes 02 ◯ No

J01_04b1. What is the total size of the land? E J01_04a==1	NUMERIC: DECIMAL J01_04b1 ------------------------------

J01_04b2. Unit E J01_04a==1	SINGLE-SELECT J01_04b2 03 ◯ Acre 04 ◯ Square fifth

J01_04c. If you were to sell, what is the total value? Local currency E J01_04a==1	NUMERIC: INTEGER J01_04c ------------------------------

J. LAND OWNERSHIP, OTHER ASSETS AND BUSINESS AT HOME
J.2 BUSINESS AT HOME

J02_01. Screening question to insert: do you have business from home/compond (home business)	SINGLE-SELECT J02_01 01 ◯ Yes 02 ◯ No

J02_02. Enumerator: Is [business owner] present?	SINGLE-SELECT	J02_02
	01 ⭕ Yes	
	02 ⭕ No	

I လုပ်ငန်း ပိုင်ရှင်လွင် မရရှိပုဝါက ဖြေကြားး ပေးနိုင်သူကို မေးရန်။

E J02_01==1

J. LAND OWNERSHIP, OTHER ASSETS AND BUSINESS AT HOME / J.2 BUSINESS AT HOME
BUSINESS OWNER

E J02_01==1

J02_03. Enumerator: Ask the related household enterprise questions to the present business owner Individual ID from Household Roster	SINGLE-SELECT: LINKED	J02_03

J02_04.In the last 12 months, in which months did this enterprise operates? Read out loud for each month Answer all that apply	MULTI-SELECT	J02_04
	01 ☐ January (ပ္ကြာသို - ဆောင်း)	
	02 ☐ February (တပို့တွဲ - ဆောင်း)	
	03 ☐ March (တပေ္ဂါင်း - နွ္ဂေ)	
	04 ☐ April (တန္ဂခူး - နွ္ဂေ)	
	05 ☐ May (ကဆုန္ဂ - နွ္ဂေ)	
	06 ☐ June (နယ္ဂုန္ဂ - မိုး)	
	07 ☐ July (ဝ္ဂါဆို - မိုး)	
	08 ☐ August (ဝ္ဂါခေ္ဂါင္ဂ - မိုး)	
	09 ☐ September (တော္ဂသလင္ဂး - မိုး)	
	10 ☐ October (သီတင္ဂးက္ပူ္ဂတ္ဂ - မိုး)	
	11 ☐ November (တန္ဂဆောင္ဂမုန္ဂး - ဆောင်း)	
	12 ☐ December (နတ္ဂတော္ဂ - ဆောင်း)	
	13 ☐ Used all year	

J02_05. What was the total revenue of this business or activity in the last month that it was operating? Local Currency	NUMERIC: INTEGER	J02_05

J02_06. 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? Regular month's total sales	NUMERIC: INTEGER	J02_06

J02_07. In a regular month, how many hours does your enterprise operate each day and night (max 24 hours)? Number of Hours	NUMERIC: INTEGER	J02_07

V1 self<=24
M1 Max 24

J02_08. In a typical month, how many hours does your enterprise operate each night (max 12 hours)? Number of hours	NUMERIC: INTEGER	J02_08

V1 self<=12
M1 Max 12

J02_09. Are your working hours limited by the supply of energy in your business?	SINGLE-SELECT	J02_09
	01 ⭕ Yes	
	02 ⭕ No	

J02_10. What are all the different sources of energy that you use in your business? Multiple responses possible	MULTI-SELECT	J02_10
	001 ☐ National Grid connection	
	002 ☐ Border, Thai grid	
	003 ☐ Township grid	

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

J02_10Other. Other(Specify)

E `J02_10.Contains(555)`

TEXT   J02_10Other

....

J02_11. Interviewer/CAPI check: A61 Is the bussiness connected to the national grid or the local mini grid (response 1,2,3, or 4 from J02_10 ?

V1 `(self==1 && J02_10.ContainsAny(1,2,3,4)) || self!=1`
M1 check with J02_10

SINGLE-SELECT   J02_11

01 ◯ Yes
02 ◯ No

J02_12. Does the enterprise have a separate electricity bill from household use?

E `J02_10.ContainsAny(1,2,3,4)`

SINGLE-SELECT   J02_12

01 ◯ Yes
02 ◯ No

J02_13. How are you billed for electricity? Read options aloud

E `J02_10.ContainsAny(1,2,3,4) && J02_12==1`

SINGLE-SELECT   J02_13

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, specify
111 ◯ No bill for electricity

J02_13Other. Other(Specify)

E `J02_13==555`

TEXT   J02_13Other

....

J02_14. What is the most common way to make your electricity bill payment?

E `J02_10.ContainsAny(1,2,3,4) && J02_12==1`

SINGLE-SELECT   J02_14

001 ◯ Pay to bill collector
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, specify

J02_14Other. Other(Specify)

E `J02_14==555`

TEXT   J02_14Other

....

J02_15. Enumerator: If the respondent pays the energy company or has a record of the electricity payment, ask to see the electricity bill/invoice and use it for A.66 and A.67.

E `J02_10.ContainsAny(1,2,3,4) && J02_12==1 && J02_14!=111`

SINGLE-SELECT   J02_15

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

J02_16. In the last month, how much did you spend on the electric bill? Calculate amount paid from the last bill. Local Currency Don't Know…………………………………888

E `J02_10.ContainsAny(1,2,3,4) && J02_12==1 && J02_14!=111`

NUMERIC: INTEGER   J02 16

J02_17. IIn the last month how much electricity did your enterprise use? Calculate usage from the last bill. Quantity in Kilowatt Hour (kWh) Don't Know…………………………………888 Error! Reference source not found.

E `J02_10.ContainsAny(1,2,3,4) && J02_12==1 && J02_14!=111`

NUMERIC: INTEGER   J02 17

J02_18. In a typical month, how many hours of electricity are available each day from the grid? (Cannot exceed hours of operation in A.57 Hours of supply Don't Know…………………………………888

E `J02_10.ContainsAny(1,2,3,4)`
V1 `self<=J02_07 || self==888`
M1 less than or equal operation hour

NUMERIC: INTEGER   J02 18

J02_19. In nighttime hours your business is usually open during the night, how many hours of electricity are available from the grid? Hours of supply Don't know…………………………………888

E `J02_10.ContainsAny(1,2,3,4)`
V1 `self<=J02_08 || self==888`
M1 Less than or equal A58

NUMERIC: INTEGER   J02 19

J02_20a. In a typical summer season how many outages/blackouts does the enterprise experience in a week Number of outages/blackouts in a week for;

I (Instruction: Enter 0 for no outage or blackout. Enter actual number of outage or blackouts that respondent answer. If not electricity available during that particular season enter (- 999).
E `J02_10.ContainsAny(1,2,3,4)`

NUMERIC: INTEGER   J02 20a

J02_20b. In a typical rain season how many outages/blackouts does the enterprise experience in a week Number of outages/blackouts in a week for;

I (Instruction: Enter 0 for no outage or blackout. Enter actual number of outage or blackouts that respondent answer. If not electricity available during that particular season enter (- 999).
E `J02_10.ContainsAny(1,2,3,4)`

NUMERIC: INTEGER   J02 20b

J02_20c. c. In a typical winter season how many outages/blackouts does the enterprise experience in a week Number of outages/blackouts in a week for;

I (Instruction: Enter 0 for no outage or blackout. Enter actual number of outage or blackouts that respondent answer. If not electricity available during that particular season enter (- 999).
E `J02_10.ContainsAny(1,2,3,4)`

NUMERIC: INTEGER   J02 20c

J02_21. In a typical week, what was the total duration of all the outages/blackouts? Minutes

E `J02_10.ContainsAny(1,2,3,4)`

NUMERIC: INTEGER   J02 21

J02_22. During a typical month, what are the three main ways your business was affected by an electricity power outage? Do not prompt. Multiple responses possible. E `J02_10.ContainsAny(1,2,3,4)`	MULTI-SELECT J02_22 001 ☐ Continue all operations on backup supply 002 ☐ Continue reduced operations on 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 006 ☐ Used more expensive alternate energy sources to run operations/ keep perishables cold 007 ☐ Wasted perishable products/discarded damaged goods 008 ☐ Machines/appliances were damaged in the process 009 ☐ Meetings/transactions were delayed 010 ☐ Stop operations and waited for power to return 011 ☐ Not affected by last outage 555 ☐ Other, specify
J02_22Other. Other(Specify) E `J02_22.Contains(555)`	TEXT J02_22Other ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯
J02_23. Was there a loss of revenue in a typical month due to power outages? E `J02_10.ContainsAny(1,2,3,4)`	SINGLE-SELECT J02_23 01 ◯ Yes 02 ◯ No
J02_24. How much was the loss of revenue in a typical month due to power outages? Local currency Don't know……………………………888 E `J02_10.ContainsAny(1,2,3,4) && J02_23==1`	NUMERIC: INTEGER J02_24 ------------------------------
J02_25. How much was the extra costs of operating during the outage (e.g. wasted products, paid workers, running a backup generator etc.)? Local currency Don't know……………………………888 No extra cost…….0 E `J02_10.ContainsAny(1,2,3,4)`	NUMERIC: INTEGER J02_25 ------------------------------
J02_26. What are the back-up sources for lighting for the enterprise? (Multiple responses possible) E `J02_10.ContainsAny(1,2,3,4)`	MULTI-SELECT J02_26 001 ☐ 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 008 ☐ No backup sources 555 ☐ Other, specify 111 ☐ Same as the household (including no back-up)
J02_26Other. Other(Specify) E `J02_26.Contains(555)`	TEXT J02_26Other ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯

J02_27. Interviewer/CAPI check: Is a solar device used in the enterprise as the main source of electricity (response 6 or 7 from A.60 is main source)?	SINGLE-SELECT J02 27 01 ◯ Yes 02 ◯ No
V1 `(self==1 && J02_10.ContainsAny(6,7)) || self!=1` M1 Check with J02_10	
J02_28. How many Solar lanterns does your enterprise use? Indicate '0' if enterprise uses none 0 If unknown indicate '888'	NUMERIC: INTEGER J02_28 -------------------------------
E `J02_10.ContainsAny(6,7) || J02_26.ContainsAny(3,4)`	
J02_29a. How many Solar lighting systems does your enterprise use? Indicate '0' if enterprise uses none If unknown indicate ' 888'	NUMERIC: INTEGER J02 29a -------------------------------
E `J02_10.ContainsAny(6,7) || J02_26.ContainsAny(3,4)`	
J02_29b. What is their total watt size? Indicate '0' if enterprise uses none If unknown indicate ' 888'	NUMERIC: INTEGER J02_29b -------------------------------
E `J02_10.ContainsAny(6,7) || J02_26.ContainsAny(3,4)`	
J02_30a. How many Solar home systems does your enterprise use? Indicate '0' if enterprise uses none If unknown indicate ' 888'	NUMERIC: INTEGER J02 30a -------------------------------
E `J02_10.ContainsAny(6,7) || J02_26.ContainsAny(3,4)`	
J02_30b. What is their combined total system Wp size? Indicate '0' if enterprise uses none If unknown indicate ' 888'	NUMERIC: INTEGER J02_30b -------------------------------
E `J02_10.ContainsAny(6,7) || J02_26.ContainsAny(3,4)`	
J02_31. What are the solar devices used for? Multiple responses possible	MULTI-SELECT J02 31 001 ☐ Lighting 002 ☐ Cell phone charging – for the enterprise 003 ☐ Cell phone charging – as a charging station 004 ☐ Operating laptop/computer/tablet 005 ☐ Operate photocopy machine/scanner 006 ☐ Providing entertainment (e.g. playing movies) 007 ☐ Refrigerator 008 ☐ Powering other appliances – please list specifically (e.g. solar pump, milling machine, electric hair dryer, sewing machine etc) 555 ☐ Other
E `J02_10.ContainsAny(6,7) || J02_26.ContainsAny(3,4)`	
J02_31Other. Other(Specify)	TEXT J02_31Other ....
E `J02_31.Contains(555)`	
J02_32. How long has your business been using solar energy? In months (Enumerator, if respondent answers in years, convert to months) Don't know......888	NUMERIC: INTEGER J02_32 -------------------------------
E `J02_10.ContainsAny(6,7) || J02_26.ContainsAny(3,4)`	

J.3 HOUSEHOLD ECONOMIC SHOCKS

STATIC TEXT

Only record information for events that negatively affected the economic situation of the household.

J03_01a. In the last 12 months, have you been affected by Failure/loss of business including agricultural failures (crop disease, livestock death, etc)? Natural disaster	SINGLE-SELECT J03_01a 01 ◯ Yes 02 ◯ No
J03_02a. Who was affected by the event? Read options aloud E J03_01a==1	SINGLE-SELECT J03_02a 01 ◯ Just this household 02 ◯ Family members outside HH 03 ◯ Several HHs in this village 04 ◯ Most or all HHs in this village 05 ◯ Several villages in this area
J03_01b. In the last 12 months, have you been affected by Loss of employment, due to illness illness/injury of economically active household member?	SINGLE-SELECT J03_01b 01 ◯ Yes 02 ◯ No
J03_02b. Who was affected by the event? Read options aloud E J03_01b==1	SINGLE-SELECT J03_02b 01 ◯ Just this household 02 ◯ Family members outside HH 03 ◯ Several HHs in this village 04 ◯ Most or all HHs in this village 05 ◯ Several villages in this area

K. ATTITUDE

STATIC TEXT

The respondent should be the most knowledgeable household member on household electricity, as identified in

KRESP1. Enumerator: Record Respondent ID for this section	SINGLE-SELECT: LINKED KRESP1

K. ATTITUDE
K.1 GENERAL OPINION ON GRID CONNECTION

K01_01. Interviewer/CAPI check: Does the household have a connection to the national grid?	SINGLE-SELECT K01 01 01 ◯ Yes 02 ◯ No
K01_02. How has the price of electricity changed over time? Read options aloud (Do not read option Don't know aloud, type 888 if relevant.) E K01_01==1	SINGLE-SELECT K01 02 001 ◯ It has gotten much higher 002 ◯ Stayed about the same 003 ◯ It has gotten cheaper 888 ◯ Don't know if there are any price change
K01_03. How has the frequency of black out or brown out changed over time? Read options aloud (Do not read option Don't know aloud, type 888 if relevant.)	SINGLE-SELECT K01 03 001 ◯ It has gotten worse 002 ◯ Stayed the same 003 ◯ Better

E `K01_01==1`	888 ○ Don't know

K01_04. How has the duration of electricity supply at night changed over? Read options aloud (Do not read option Don't know aloud, type 888 if relevant.)

E `K01_01==1`

SINGLE-SELECT   K01_04
001 ○ It has gotten worse
002 ○ Stayed the same
003 ○ Better
888 ○ Don't know

K01_05. Since you first received your electricity connection, how has the duration of electricity supply during the day changed? Read options aloud (Do not read option Don't know aloud, type 888 if relevant.)

E `K01_01==1`

SINGLE-SELECT   K01_05
001 ○ It has gotten worse
002 ○ Stayed the same
003 ○ Better
888 ○ Don't know

K01_06. What appliences that you don't have and want to have and use them? Up to 3 answers possible

MULTI-SELECT: ORDERED   K01_06
001 ☐ Fan
002 ☐ Radio
003 ☐ Television
004 ☐ Refrigerator
005 ☐ Electronic Tablet
006 ☐ Computer
007 ☐ Hair clippers
008 ☐ Power Tools
009 ☐ Phone with internet (smartphone)
555 ☐ Other, specify
777 ☐ None

K01_06Other. Other(Specify)

E `K01_06.Contains(555)`

TEXT   K01_06Other

....

K01_07. Why do you not yet own one of these appliances? Multiple responses possible

MULTI-SELECT   K01_07
001 ☐ Too expensive
002 ☐ No products available
003 ☐ Products require too much energy, cannot power them with my system
555 ☐ Other, specify

K01_07Other. Other(Specify)

E `K01_07.Contains(555)`

TEXT   K01_07Other

....

K01_08. How satisfied are you with the service from [MAIN SOURCE OF ELECTRICITY 04]? Read aloud these options.

SINGLE-SELECT   K01_08
01 ○ Very satisfied
02 ○ Somewhat satisfied
03 ○ Neutral
04 ○ Unsatisfied
05 ○ Very unsatisfied

K. ATTITUDE
K.2 ELECTRICITY

STATIC TEXT

Statement Read the following statement and ask respondent whether he or she agrees (Yes), disagrees (No), or has no opinion.

K02_01. With electrical light the children can study more at night.

SINGLE-SELECT   K02_01
01 ○ Agrees
02 ○ Disagrees

03 ⭕ No Opinion

K02_02. Our household is happy with the lighting system that we have in our home.	SINGLE-SELECT · K02_02 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K02_03. To use kerosene or diesel for lamp lighting is harmful for the health.	SINGLE-SELECT · K02_03 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K02_05. A solar based system is a good source of electricity.	SINGLE-SELECT · K02_05 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K02_06. Electricity helps with domestic tasks and care of the children.	SINGLE-SELECT · K02_06 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K02_08. The monthly electric bill is or would be a financial burden for my family.	SINGLE-SELECT · K02_08 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K02_09. The electricity makes it easy to have information and the news.	SINGLE-SELECT · K02_09 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K02_11. News and information from radio and television provide good information relevant for conducting business and agricultural activities.	SINGLE-SELECT · K02_11 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion

K. ATTITUDE
K.3 COOKING

STATIC TEXT

Statement Read the following statement and ask respondent whether he or she agrees (Yes), disagrees (No), or has no opinion.

K03_01. Smoke from stove is good at chasing insects away.	SINGLE-SELECT · K03_01 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K03_02. Smoke from cooking fuels is a big health problem in my family.	SINGLE-SELECT · K03_02 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K03_04. Firewood is expensive for cooking.	SINGLE-SELECT · K03_04 01 ⭕ Agrees 02 ⭕ Disagrees 03 ⭕ No Opinion
K03_08. Cooking with firewood is harmful to a person's health.	SINGLE-SELECT · K03_08 01 ⭕ Agrees

| | 02 ○ Disagrees |
| | 03 ○ No Opinion |

K03_09. Electricity is expensive for cooking.	SINGLE-SELECT · K03_09 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K03_10. Firewood is hard to obtain.	SINGLE-SELECT · K03_10 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K03_11. LPG is expensive for cooking household meals.	SINGLE-SELECT · K03_11 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K03_12. Certain food tastes better when cooked with biomass compared to gas or electricity.	SINGLE-SELECT · K03_12 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K03_13. Charcoal is hard to obtain in the market.	SINGLE-SELECT · K03_13 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K03_14. I prefer to use "Three/five Stone" as the firewood stove at home.	SINGLE-SELECT · K03_14 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K03_15. Collecting and preparing firewood is a burden for my family.	SINGLE-SELECT · K03_15 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion

K. ATTITUDE
K.4 STREET LIGHTING

STATIC TEXT

Statement Read the following statement and ask respondent whether he or she agrees (Yes), disagrees (No), or has no opinion.

K04_01. Street lighting makes it safer for women and girls to be outside at night.	SINGLE-SELECT · K04_01 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K04_02. Street lighting makes it safer for children to be outside at night.	SINGLE-SELECT · K04_02 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K04_03. Street lighting leads to fewer crimes.	SINGLE-SELECT · K04_03 01 ○ Agrees 02 ○ Disagrees 03 ○ No Opinion
K04_06. Street lighting lets night markets and	SINGLE-SELECT · K04_06

other businesses stay open.	01 ◯ Agrees
	02 ◯ Disagrees
	03 ◯ No Opinion

K.5 PAYMENT/FINANCE

STATIC TEXT

Statement Read the following statement and ask respondent whether he or she agrees (Yes), disagrees (No), or has no opinion.

K05_03. 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 K05_03 01 ◯ Agrees 02 ◯ Disagrees 03 ◯ No Opinion
K05_04. I would rather pay per unit of electricity (kWh) instead of renting or buying a solar system.	SINGLE-SELECT K05_04 01 ◯ Agrees 02 ◯ Disagrees 03 ◯ No Opinion
K05_07. I would borrow money to purchase a TV.	SINGLE-SELECT K05 07 01 ◯ Agrees 02 ◯ Disagrees 03 ◯ No Opinion
K05_08. I would borrow money to purchase a refrigerator.	SINGLE-SELECT K05 08 01 ◯ Agrees 02 ◯ Disagrees 03 ◯ No Opinion

K. ATTITUDE
K.6 DECISION MAKING

STATIC TEXT

Statement Read the following statement and ask respondent whether he or she agrees (Yes), disagrees (No), or has no opinion.

K06_02. Men usually make decisions on the distribution of family budget.	SINGLE-SELECT K06 02 01 ◯ Agrees 02 ◯ Disagrees 03 ◯ No Opinion
K06_03. Men usually make decisions on purchasing of energy and energy-consuming devices.	SINGLE-SELECT K06 03 01 ◯ Agrees 02 ◯ Disagrees 03 ◯ No Opinion

L. WOMEN'S EMPOWERMENT

STATIC TEXT

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

LRESP1. Enumerator: Record Respondent ID for this section	SINGLE-SELECT: LINKED LRESP1

L.1 MOBILITY

STATIC TEXT

STATEMENT Can you do the following activities alone or you have to go with your husband: Mark who decides about each of the activities below.

L01_01. Visiting parents/relatives/friends within or outside the village.	SINGLE-SELECT L01_01
	001 ◯ Can do herself
	002 ◯ Can do with husband
	003 ◯ Can do with friend/relative/family member
	555 ◯ Other Specify

L01_01Other. Other Specify	TEXT L01_01Other
E `L01_01==555`	....

L01_02. Going to markets/banks/commercial centers/places of work.	SINGLE-SELECT L01_02
	001 ◯ Can do herself
	002 ◯ Can do with husband
	003 ◯ Can do with friend/relative/family member
	555 ◯ Other Specify

L01_02Other. Other Specify	TEXT L01_02Other
E `L01_02==555`	....

L01_03. Going outside the ward/village	SINGLE-SELECT L01_03
	001 ◯ Can do herself
	002 ◯ Can do with husband
	003 ◯ Can do with friend/relative/family member
	555 ◯ Other Specify

L01_03Other. Other Specify	TEXT L01_03Other
E `L01_03==555`	....

L.2 ACCESS TO INFORMATION, ORGANIZATION MEMBERSHIP, VILLAGE ELECTRIFICATION COMMITTEE, CAPACITY BUILDING AND ACCESS TO FINANCE.

L02_01. What are the main sources of information you use?	MULTI-SELECT L02_01
	001 ☐ Village Head or village administrative team
	002 ☐ Village meeting
	003 ☐ Village loud speaker
	004 ☐ Radio
	005 ☐ TV
	006 ☐ Newspaper
	007 ☐ Women's groups
	008 ☐ Other organizations
	009 ☐ Relatives
	010 ☐ Neighbor
	555 ☐ Other specify

L02_01Other. Other specify	TEXT L02_01Other
E `L02_01.Contains(555)`	....

L02_02. Do you receive information about	SINGLE-SELECT L02_02

electricity/energy service available in your areas?	01 ◯ Yes 02 ◯ No

L02_03. If you are a member of a women's group, which type of group are you a member of/do you belong to?	SINGLE-SELECT L02_03 001 ◯ Not a member 002 ◯ Religious related activities 003 ◯ Health care related activities 004 ◯ Income generating activities 006 ◯ Self help organization 007 ◯ Savings group 008 ◯ Microfinance organization 009 ◯ Cooperative 010 ◯ Village administrative committee 011 ◯ Village electrification committee 555 ◯ Other specify
L02_03Other. Other specify E L02_03==555	TEXT L02_03Other ....
L02_04. What do you think are the main constraints women face in participating in organizations or activities in the area?	SINGLE-SELECT L02_04 001 ◯ Limited time 002 ◯ Lack of support from family 003 ◯ Limited cofidence 004 ◯ Limited education 555 ◯ Other specify
L02_04Other. Other specify E L02_04==555	TEXT L02_04Other ....
L02_05. If you are a member of the village electrification committee, how often do you meet?	SINGLE-SELECT L02_05 001 ◯ Not a member 002 ◯ Never 003 ◯ Once a month 004 ◯ Once every two months 555 ◯ Other specificy
L02_05Other. Other specify E L02_05==555	TEXT L02_05Other ....
L02_06. Have you had any training on electricity or energy related equipment?	SINGLE-SELECT L02_06 01 ◯ Yes 02 ◯ No
L02_07. Why haven't you had any training on electricity or energy related equipment? E L02_06==1	SINGLE-SELECT L02_07 001 ◯ Did not receive the invitation 002 ◯ Training only for headed hosuehold 003 ◯ Does not have time 004 ◯ No support from family to attend 555 ◯ Other, specify
L02_07Other. Other specify E L02_07==555	TEXT L02_07Other ....
L02_08. What types of skills training do you think you need?	SINGLE-SELECT L02_08 001 ◯ To read and write 002 ◯ Vocational training

	003 ◯ Accounting
	004 ◯ Income generating activity
	005 ◯ Agriculture related
	555 ◯ Other specify

L02_08Other. Other specify	TEXT L02_08Other
E L02_08==555	···

L02_09. Do you have bank account? Or joint bank account with husband?	SINGLE-SELECT L02_09
	01 ◯ No account
	02 ◯ Own
	03 ◯ Joint

L02_10. What sources of credit/loans do you have access to?	SINGLE-SELECT L02_10
	001 ◯ None
	002 ◯ Commercial/government bank
	003 ◯ Cooperative credit union
	004 ◯ Microfinance institution
	005 ◯ Rural bank
	006 ◯ State loan
	007 ◯ NGO
	008 ◯ Business firm
	009 ◯ Employer
	010 ◯ SACCO/Moneylender
	011 ◯ Shop
	012 ◯ Relative/friend/neighbor
	555 ◯ Other, specify

L02_10Other. Other specify	TEXT L02_10Other
E L02_10==555	···

L02_11. Do you have sufficient money at the end of the month to purchase necessary goods/services for your families?	SINGLE-SELECT L02_11
	01 ◯ Yes
	02 ◯ No

GEO B

Interview Language	SINGLE-SELECT Language
	01 ◯ ကချွင်ဲ
	02 ◯ ကယား
	03 ◯ ကရင်ဲ
	04 ◯ ချွင်ဲး
	05 ◯ မွန်ဲ
	06 ◯ ဗမာ
	07 ◯ ရခိုင်ဲ
	08 ◯ ရှမ်း
	09 ◯ အခြားတိုင်းရင်းသား ဘာသာစကား
	10 ◯ တရုတ်ဲ
	11 ◯ အာရဗီ
	12 ◯ ဟိန္ဒ၊ အခြားအိန္ဒိယဘာသာစကား
	13 ◯ အခြားနိုင်ငံခြားဘာသာစကား

Please take a photo	PICTURE Photo

Please take gps location	GPS Geo
	– –
	N

W

A

APPENDIX A — ENABLING CONDITIONS

[1] C01e_02: C01e_02. What is the total sum of hours used?
Enablement Condition:

```
C01e_01>=1 && (@rowcode==101||
@rowcode==102||
@rowcode==103||
@rowcode==104||
@rowcode==201||
@rowcode==202||
@rowcode==203||
@rowcode==301||
@rowcode==302||
@rowcode==303||
@rowcode==304||
@rowcode==305||
@rowcode==306||
@rowcode==307||
@rowcode==401||
@rowcode==402||
@rowcode==403||
@rowcode==404||
@rowcode==405||
@rowcode==406||
@rowcode==407||
@rowcode==501||
@rowcode==502||
@rowcode==503||
@rowcode==504
)
```

[2] C02e_02: C02e_02. What is the total sum of hours used?
Enablement Condition:

```
C02e_01>=1 && (@rowcode==101||
@rowcode==102||
@rowcode==103||
@rowcode==104||
@rowcode==201||
@rowcode==202||
@rowcode==203||
@rowcode==301||
@rowcode==302||
@rowcode==303||
@rowcode==304||
@rowcode==305||
@rowcode==306||
@rowcode==307||
@rowcode==401||
@rowcode==402||
@rowcode==403||
@rowcode==404||
@rowcode==405||
@rowcode==406||
@rowcode==407||
@rowcode==501||
@rowcode==502||
@rowcode==503||
@rowcode==504
)
```

[3] C03e_02: C03e_02. What is the total sum of hours used?
Enablement Condition:

```
C03e_01>=1 && (@rowcode==101||
@rowcode==102||
@rowcode==103||
@rowcode==104||
@rowcode==201||
@rowcode==202||
@rowcode==203||
@rowcode==301||
@rowcode==302||
@rowcode==303||
@rowcode==304||
@rowcode==305||
@rowcode==306||
@rowcode==307||
@rowcode==401||
@rowcode==402||
@rowcode==403||
@rowcode==404||
@rowcode==405||
@rowcode==406||
@rowcode==407||
@rowcode==501||
@rowcode==502||
@rowcode==503||
@rowcode==504
```

)

[4] C04d_01: C04d_01. In a typical day how many of the %rostertitle% are used. Write 0 if none
Enablement Condition:

```
@rowcode==101||
@rowcode==102||
@rowcode==103||
@rowcode==104||
@rowcode==201||
@rowcode==202||
@rowcode==203||
@rowcode==301||
@rowcode==302||
@rowcode==303||
@rowcode==304||
@rowcode==305||
@rowcode==306||
@rowcode==307||
@rowcode==401||
@rowcode==402||
@rowcode==403||
@rowcode==404||
@rowcode==405||
@rowcode==406||
@rowcode==407||
@rowcode==501||
@rowcode==502||
@rowcode==503||
@rowcode==504||
@rowcode==508||
@rowcode==509||
@rowcode==601||
@rowcode==606||
@rowcode==802||
@rowcode==803||
@rowcode==804||
@rowcode==805
```

[5] C04d_02: C04d_02. What is the total sum of hours used?
Enablement Condition:

```
C04d_01>=1 && (@rowcode==101||
@rowcode==102||
@rowcode==103||
@rowcode==104||
@rowcode==201||
@rowcode==202||
@rowcode==203||
@rowcode==301||
@rowcode==302||
@rowcode==303||
@rowcode==304||
@rowcode==305||
@rowcode==306||
@rowcode==307||
@rowcode==401||
@rowcode==402||
@rowcode==403||
@rowcode==404||
@rowcode==405||
@rowcode==406||
@rowcode==407||
@rowcode==501||
@rowcode==502||
@rowcode==503||
@rowcode==504
)
```

[6] C05d_01: C05d_01. In a typical day how many of the %rostertitle% are used. Write 0 if none 0⮐NEXT ROW
Enablement Condition:

```
@rowcode==101||
@rowcode==102||
@rowcode==103||
@rowcode==104||
@rowcode==201||
@rowcode==202||
@rowcode==203||
@rowcode==301||
@rowcode==302||
@rowcode==303||
@rowcode==304||
@rowcode==305||
@rowcode==306||
@rowcode==307||
@rowcode==401||
@rowcode==402||
@rowcode==403||
@rowcode==404||
@rowcode==405||
@rowcode==406||
```

```
@rowcode==407||
@rowcode==501||
@rowcode==502||
@rowcode==503||
@rowcode==504||
@rowcode==508||
@rowcode==509||
@rowcode==601||
@rowcode==606||
@rowcode==802||
@rowcode==803||
@rowcode==804||
@rowcode==805
```

[7] C05d_02: C05d_02. What is the total sum of hours used? Number of hours
Enablement Condition:

```
C05d_01>=1 && (@rowcode==101||
@rowcode==102||
@rowcode==103||
@rowcode==104||
@rowcode==201||
@rowcode==202||
@rowcode==203||
@rowcode==301||
@rowcode==302||
@rowcode==303||
@rowcode==304||
@rowcode==305||
@rowcode==306||
@rowcode==307||
@rowcode==401||
@rowcode==402||
@rowcode==403||
@rowcode==404||
@rowcode==405||
@rowcode==406||
@rowcode==407||
@rowcode==501||
@rowcode==502||
@rowcode==503||
@rowcode==504
)
```

[8] : Geo B
Enablement Condition:

```
A01_01 !=null &&
A01_02 !=null &&
A01_03 !=null &&
A01_04 !=null &&
A01_05 !=null &&
B01_01 !=null &&
B01_02 !=null &&
B01_06 !=null &&
B01_09 !=null &&
B01_14 !=null &&
B02_01 !=null &&
B02_06 !=null &&
B03a_01 !=null &&
B03a_06 !=null &&
B03a_11 !=null &&
B03b_03 !=null &&
B03b_08 !=null &&
C1 !=null &&
C01f01 !=null &&
C02a01 !=null &&
C03a01 !=null &&
C04a01 !=null &&
C05a01 !=null &&
C06_01 !=null &&
C07_01 !=null &&
C08_01 !=null &&
D01_01 !=null &&
D04_01 !=null &&
E01_01 !=null &&
E02_10 !=null &&
E02_11 !=null &&
G01_01c !=null &&
G02_01d !=null &&
G03_01b !=null &&
G04_01 !=null &&
G05_01a !=null &&
G06_01b !=null &&
G07_01a !=null &&
H03_01 !=null &&
H04_01 !=null &&
I01_05 !=null &&
I02_02 !=null &&
I03_09 !=null &&
J01_02a !=null &&
J03_01b !=null &&
J02_01 !=null &&
```

```
K01_06 !=null &&
K02_09 !=null &&
K03_11 !=null &&
K04_03 !=null &&
K05_07 !=null &&
K06_03 !=null &&
L01_03 !=null &&
L02_03 !=null &&
L02_09 !=null &&
L02_10 !=null
```

APPENDIX B — VALIDATION CONDITIONS AND MESSAGES

[1] C01b02b: C01b02b. In the last 12 months, (start from this month) which months have the worst electric service. (Multiple response)
Validation Condition:

```
((C01b02a.Contains(1) && !C01b02b.Contains(1)) || (!C01b02a.Contains(1) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(2) && !C01b02b.Contains(2)) || (!C01b02a.Contains(2) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(3) && !C01b02b.Contains(3)) || (!C01b02a.Contains(3) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(4) && !C01b02b.Contains(4)) || (!C01b02a.Contains(4) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(5) && !C01b02b.Contains(5)) || (!C01b02a.Contains(5) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(6) && !C01b02b.Contains(6)) || (!C01b02a.Contains(6) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(7) && !C01b02b.Contains(7)) || (!C01b02a.Contains(7) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(8) && !C01b02b.Contains(8)) || (!C01b02a.Contains(8) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(9) && !C01b02b.Contains(9)) || (!C01b02a.Contains(9) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(10) && !C01b02b.Contains(10)) || (!C01b02a.Contains(10) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(11) && !C01b02b.Contains(11)) || (!C01b02a.Contains(11) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(12) && !C01b02b.Contains(12)) || (!C01b02a.Contains(12) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(13) && !C01b02b.Contains(13)) || (!C01b02a.Contains(13) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C01b02a.Contains(14) && !C01b02b.Contains(14)) || (!C01b02a.Contains(14) &&
C01b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777)))
```

Validation Message: not equal no services
Validation Condition:

```
(!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) || (self.Contains(777) &&
!self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14))
```

Validation Message: if choose none, not choose other

[2] C02b02b: C02b02b. In the last 12 months, (start from this month) which months have the worst electric service. (Multiple response)
Validation Condition:

```
((C02b02a.Contains(1) && !C02b02b.Contains(1)) || (!C02b02a.Contains(1) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(2) && !C02b02b.Contains(2)) || (!C02b02a.Contains(2) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(3) && !C02b02b.Contains(3)) || (!C02b02a.Contains(3) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(4) && !C02b02b.Contains(4)) || (!C02b02a.Contains(4) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(5) && !C02b02b.Contains(5)) || (!C02b02a.Contains(5) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(6) && !C02b02b.Contains(6)) || (!C02b02a.Contains(6) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(7) && !C02b02b.Contains(7)) || (!C02b02a.Contains(7) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(8) && !C02b02b.Contains(8)) || (!C02b02a.Contains(8) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(9) && !C02b02b.Contains(9)) || (!C02b02a.Contains(9) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(10) && !C02b02b.Contains(10)) || (!C02b02a.Contains(10) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(11) && !C02b02b.Contains(11)) || (!C02b02a.Contains(11) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(12) && !C02b02b.Contains(12)) || (!C02b02a.Contains(12) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(13) && !C02b02b.Contains(13)) || (!C02b02a.Contains(13) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C02b02a.Contains(14) && !C02b02b.Contains(14)) || (!C02b02a.Contains(14) &&
C02b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777)))
```

Validation Message: not equal no services
Validation Condition:

```
(!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) || (self.Contains(777) &&
!self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14))
```

Validation Message: if choose none, not choose other

[3] C05b02b: C05b02b. What are the services like for each month? Note: For Worst months. (Multiple choice)
Validation Condition:

```
(!self.Contains(777) && self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14)) || (self.Contains(777) &&
!self.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14))
```

Validation Message: if choose none, not choose other
Validation Condition:

```
((C05b02a.Contains(1) && !C05b02b.Contains(1)) || (!C05b02a.Contains(1) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(2) && !C05b02b.Contains(2)) || (!C05b02a.Contains(2) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(3) && !C05b02b.Contains(3)) || (!C05b02a.Contains(3) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(4) && !C05b02b.Contains(4)) || (!C05b02a.Contains(4) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(5) && !C05b02b.Contains(5)) || (!C05b02a.Contains(5) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(6) && !C05b02b.Contains(6)) || (!C05b02a.Contains(6) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(7) && !C05b02b.Contains(7)) || (!C05b02a.Contains(7) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(8) && !C05b02b.Contains(8)) || (!C05b02a.Contains(8) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(9) && !C05b02b.Contains(9)) || (!C05b02a.Contains(9) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(10) && !C05b02b.Contains(10)) || (!C05b02a.Contains(10) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(11) && !C05b02b.Contains(11)) || (!C05b02a.Contains(11) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(12) && !C05b02b.Contains(12)) || (!C05b02a.Contains(12) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(13) && !C05b02b.Contains(13)) || (!C05b02a.Contains(13) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777))) &&
((C05b02a.Contains(14) && !C05b02b.Contains(14)) || (!C05b02a.Contains(14) &&
C05b02b.ContainsAny(1,2,3,4,5,6,7,8,9,10,11,12,13,14,777)))
```

Validation Message: not contains not services at all months

APPENDIX C — OPTIONS

[1] ID1_02: ID1_02. Govt. Grid Electrification (Office)

Options: 11:Kachin - Urban/ Electrified (Govt. grid), 12:Kachin - Urban/ Non-electrified (Govt. grid), 13:Kachin - Rural/ Electrified (Govt. grid), 14:Kachin - Rural/ Non-electrified (Govt. grid), 23:Kayah - Rural/ Electrified (Govt. grid), 32:Kayin - Urban/ Non-electrified (Govt. grid), 33:Kayin - Rural/ Electrified (Govt. grid), 34:Kayin - Rural/ Non-electrified (Govt. grid), 41:Chin - Urban/ Electrified (Govt. grid), 42:Chin - Urban/ Non-electrified (Govt. grid), 44:Chin - Rural/ Non-electrified (Govt. grid), 51:Sagaing - Urban/ Electrified (Govt. grid), 52:Sagaing - Urban/ Non-electrified (Govt. grid), 53:Sagaing - Rural/ Electrified (Govt. grid), 54:Sagaing - Rural/ Non-electrified (Govt. grid), 62:Tanintharyi - Urban/ Non-electrified (Govt. grid), 64:Tanintharyi - Rural/ Non-electrified (Govt. grid), 71:Bago - Urban/ Electrified (Govt. grid), 73:Bago - Rural/ Electrified (Govt. grid), 74:Bago - Rural/ Non-electrified (Govt. grid), 81:Magway - Urban/ Electrified (Govt. grid), 83:Magway - Rural/ Electrified (Govt. grid), 84:Magway - Rural/ Non-electrified (Govt. grid), 91:Mandalay - Urban/ Electrified (Govt. grid), 93:Mandalay - Rural/ Electrified (Govt. grid), 94:Mandalay - Rural/ Non-electrified (Govt. grid), 101:Mon - Urban/ Electrified (Govt. grid), 102:Mon - Urban/ Non-electrified (Govt. grid), 103:Mon - Rural/ Electrified (Govt. grid), 104:Mon - Rural/ Non-electrified (Govt. grid), 111:Rakhine - Urban/ Electrified (Govt. grid), 112:Rakhine - Urban/ Non-electrified (Govt. grid), 113:Rakhine - Rural/ Electrified (Govt. grid), 114:Rakhine - Rural/ Non-electrified (Govt. grid), 121:Yangon - Urban/ Electrified (Govt. grid), 123:Yangon - Rural/ Electrified (Govt. grid), 124:Yangon - Rural/ Non-electrified (Govt. grid), 131:Shan - Urban/ Electrified (Govt. grid), 132:Shan - Urban/ Non-electrified (Govt. grid), 133:Shan - Rural/ Electrified (Govt. grid), 134:Shan - Rural/ Non-electrified (Govt. grid), 141:Ayeyawady - Urban/ Electrified (Govt. grid), 142:Ayeyawady - Urban/ Non-electrified (Govt. grid), 143:Ayeyawady - Rural/ Electrified (Govt. grid), 144:Ayeyawady - Rural/ Non-electrified (Govt. grid), 151:Naypyitaw - Urban/ Electrified (Govt. grid), 153:Naypyitaw - Rural/ Electrified (Govt. grid), 154:Naypyitaw - Rural/ Non-electrified (Govt. grid),

[2] ID1_03: ID1_03. EA Code & Name

Options: 1101:10101124005 - Myitkyina - Myo Thit Gyi(W), 1102:10105102001 - Chiphwe - Oke Kat(W), 1203:10104104502 - Tanaing - Kin Sar(W), 1204:10203101007 - Phakant - Maw Wam Ward(W), 1205:10401102001 - Putao - Ho Kho(W), 1306:10201711002 - Mohnyin - Nyaung Pin Thar(VT), 1407:10203704026 - Phakant - Haung Par(VT), 2301:20101708007 - Loikaw - Chi Kel(VT), 2302:20102711005 - Dimawso - Demoso(VT), 3201:30152102001 - Shan Ywathit(Sub-Tsp) - No (2)(W), 3202:30301103002 - Myawady - Kyan Khin Su(W), 3203:30301104003 - Myawady - Myanmar Su(W), 3204:30301104043 - Myawady - Myanmar Su(W), 3205:30301105029 - Myawady - Ah Nauk Paing(W), 3206:30401105001 - Kawkareik - Auk Taung Thu Su(W), 3207:30401203003 - Kawkareik - No (3)(W), 3208:30451104005 - Payarthonezu(Sub-Tsp) - No (4) Ward(W), 3309:30101777503 - Hpa-an - Hlar Kar(VT), 3310:30102712002 - Hlaingbwe - Hti Lon(VT), 3411:30151705003 - Paingkyon(Sub-Tsp) - Naung Boe Gyi(VT), 4101:40101103006 - Haka - Pyi Taw Thar(W), 4202:40251102001 - Rihkhuadal(Sub-Tsp) - No(2)(W), 4403:40303717001 - Kanpalet - Hmu Chein Dein(VT), 5101:50101101006 - Sagaing - Dawei Zay(W), 5102:50301112011 - Monywa - Htan Taw(W), 5103:50301116001 - Monywa - Hpa Yar Gyi(W), 5204:50503102001 - Mingin - Zay Tan(W), 5205:50601102009 - Tamu - Zay Tan(W), 5206:50652105001 - Khampat(Sub-Tsp) - No (5)(W), 5207:50801101005 - Hkamti - Paw Maing(W), 5308:50101763001 - Sagaing - Ywar Thit Gyi(VT), 5309:50102712003 - Myinmu - Ahr Lar Kat Pa(VT), 5310:50202724003 - Khin U - Gway Kone(VT), 5311:50204753007 - Kambalu - Zee Kone (South)(VT), 5312:50301716003 - Monywa - Kha Tet Kan (South)(VT), 5313:50301746003 - Monywa - Pu Yit Kone(VT), 5314:50402730004 - Indaw - Maw Lu(VT), 5315:50405726002 - Kawlin - Nga Pway Lay(VT), 5316:50902703003 - Salingyi - Paung Wa(VT), 5317:50902730003 - Salingyi - Kyaing Kha Mauk(VT), 5418:50203769003 - Wetlet - Ma Gyi Hpyu(VT), 5419:50302753003 - Butalin - Ywar Thit(VT), 5420:50501705004 - Kalay - Sa Khan Gyi(VT), 5421:50901732001 - Yinmarpin - Inn(VT), 6201:60101101003 - Dawei - San Chi(W), 6202:60101106006 - Dawei - Kyet Sa Pyin(W), 6203:60101114013 - Dawei - Htein Thit, 6204:60103102003 - Thayetchaung - Kyauk Myaung(W), 6205:60201108004 - Myeik - Kan Gyi(W), 6206:60201110008 - Myeik - Kan Hpyar(W), 6207:60201112016 - Myeik - Myeik (South)(W), 6208:60201112052 - Myeik - Myeik (South)(W), 6209:60251104003 - Palauk(Sub-Tsp) - No(4)(W), 6210:60301105005 - Kawthoung - Aung Thu Kha(W), 6211:60301110011 - Kawthoung - Shwe Pyi Thar(W), 6212:60353101501 - Karathuri(Sub-Tsp) - No(1)(W), 6413:60201703011 - Myeik - In Ga Maw(VT), 7101:70101101007 - Bago - Myo Twin (East-Ka Gyi)(W), 7102:70101102018 - Bago - Myo Twin (East-Kha Gway)(W), 7103:70106105001 - Kyauktaga - Kwin (North)(W), 7104:70106203002 - Kyauktaga - Pyi Taw Thar(W), 7105:70301106040 - Pyay - Ywar Be(W), 7106:70301106043 - Pyay - Ywar Be(W), 7307:70101733017 - Bago - Inn Ta Kaw(VT), 7308:70103719010 - Kawa - ThaPyu(VT), 7309:70106734017 - Kyauktaga - Hpa Do(VT), 7310:70201712006 - Toungoo - Kyauk Taing(VT), 7311:70202744012 - Yaedashe - Thar Ga Ya(VT), 7312:70205724501 - Oatwin - Pauk Taw(VT), 7313:70301746502 - Pyay - Htan Ma Kauk(VT), 7314:70304710002 - Paunde - Pauk Taw(VT), 7315:70306710005 - Shwedaung - Nwar Ma Yan(VT), 7316:70404714011 - Okpo - Aye Mya Thar Yar(VT), 7417:70103706002 - Kawa - Kha Ni(VT), 7418:70108723001 - Shwegyin - Thet Kei Kone(VT), 7419:70302702002 - Paukkhaung - Wet Toe(VT), 7420:70402739007 - Letpadan - Zee Hpyu Kone(VT), 8101:80101108007 - Magway - Pyi Taw Thar(W), 8102:80101110005 - Magway - Kan Thar(W), 8103:80305107006 - Aunglan - San Chaung(W), 8104:80305109013 - Aunglan - Ywa htaung(W), 8305:80101721010 - Magway - Ma Gyi Kan(VT), 8306:80106723501 - Natmauk - Ywar Mun(VT), 8307:80202732003 - Pwint Phyu - Zee Taw(VT), 8308:80302711003 - Minhla - Pan Taw Pyin(VT), 8309:80401713011 - Pakokku - Kywe Te(VT), 8310:80402731004 - Yesagyo - Ma Au (Middle)(VT), 8411:80101730005 - Magway - Nyaung Kan(VT), 8412:80106730002 - Natmauk - Na-Let Khoke Pin(VT), 8413:80302735001 - Minhla - Yae Twin Gyi(VT), 8414:80402775006 - Yesagyo - Htan Nge Taw(VT), 9101:90101115501 - Aungmyetharzan - U Poke Htaw(W), 9102:90101118010 - Aungmyetharzan - Thi Ri Mar Lar (West)(W), 9103:90103117002 - Mahaaungmye - Ma Har Myaing (2)(W), 9104:90104102002 - Chanmyatharzi - Kyung Lone U Shaung(W), 9105:90105110006 - Pyigyidagun - (Ga Nge)(W), 9106:90105114019 - Pyigyidagun - (Sa Lein)(W), 9107:90204101005 - Mogok - Myo Ma(W), 9108:90204105001 - Mogok - Yae Pu(W), 9109:90551101003 - Ngathayauk(Sub-Tsp) - No (1)(W), 9110:90701102001 - Meiktila - Pauk Chaung(W), 9311:90106702001 - Amarapura - Yin Taw(VT), 9312:90107703003 - Patheingyi - Zee Cho Kone(VT), 9313:90107745010 - Patheingyi - Ohn Chaw(VT), 9314:90201726003 - Pyin Oo Lwin - Inn Yar(VT), 9315:90202729013 - Madaya - Kyauk Sa Yit Kone (South)(VT), 9316:90205717005 - Thabeikkyin - Chaung Gyi (Ta Kaung Sub-tsp)(VT), 9317:90301778003 - Kyaukse - Paung Laung Gyi(VT), 9318:90304709002 - Tada U - Han Thar Wa Di(VT), 9319:90401750002 - Myingyan - Kun Saik(VT), 9320:90404751003 - Kyaukpadaung - Let Pan Pin(VT), 9321:90501720007 - Nyaung U - Mee Laung Pyar(VT), 9322:90703732003 - Thazi - Han Zar(VT), 9323:90704760007 - Wundwin - Ywar Tan(VT), 9424:90107726004 - Patheingyi - Done Kone(VT), 9425:90302703009 - Singaing - Mee Thway Boke(VT), 9426:90403764001 - Natogyi - Ka Daung(VT), 9427:90602720005 - Pyawbwe - Seik Gyo(VT), 10101:100101115013 - Mawlamyine - Zay Cho(W), 10102:100101127007 - Mawlamyine - Naung Kha Ri(W), 10203:100106106001 - Ye - Yan Gyi Aung(W), 10204:100151102006 - Lamine(Sub-Tsp) - No (2)(W), 10305:100104713015 - Thanbyuzayat - Pa Nga(VT), 10306:100105704003 - Mudon - Kyauk Ta Lone(VT), 10307:100201743006 - Thaton - Htaung Hmu(VT), 10308:100202709025 - Paung - Zin Kyaik(VT), 10409:100102706015 - Kyaikemaraw - Hla Ka Zaing(VT), 10410:100203709004 - Kyaikto - Kha Ywea(VT), 11101:110101108000 - Sittway - Ward with 2 EAs, 11102:110101127000 - Sittway - Ward with 8 EAs, 11103:110501107002 - Thandwe - No(7)(W), 11204:110104102002 - Yathedaung - Chaung Wa(W), 11205:110204104000 - Myebon - Ward with 7 EAs, 11206:110301105000 - Maungtaw - Ward with 8 EAs, 11207:110302104005 - Buthidaung - Tha Pyay Kone(W), 11208:110552102002 - Kyeintali(Sub-Tsp) - No(2)(W), 11309:110101701503 - Sittway - Maung Ni Pyin(VT), 11310:110401701002 - Kyaukpyu - Pyin Hpyu Maw(VT), 11411:110103750000 - Pauktaw - VT with 19 EAs, 11412:110202742000 - Kyauktaw - VT with 6 EAs, 11413:110301760000 - Maungtaw - VT with 7 EAs, 11414:110501722013 - Thandwe - Sin Gaung(VT), 12101:120101110001 - Insein - Kyo Kone (West)(W), 12102:120102114007 - Mingaladon - Kyan Khin Su(W), 12103:120102125035 - Mingaladon - Pyan Lel Nay Yar Cha Htar Ye(W), 12104:120107107003 - Shwepyitha - No(7)(W), 12105:120107115023 - Shwepyitha - No(15)(W), 12106:120108106043 - Hlinethaya - No(6)(W), 12107:120108112022 - Hlinethaya - No(12)(W), 12108:120201106007 - Thingangyun - Nga/Kha (W), 12109:120202103003 - Yankin - No(3)(W), 12110:120204101012 - North Okkalapa - No(1)(W), 12111:120204114014 - North Okkalapa - (Hta Won Bei)(W), 12112:120205108005 - Thakayta - No(4)(South)(W), 12113:120206111002 - Dawbon - Ya Mon Nar(2)(W), 12114:120208102010 - Pazuntaung - No(2)(W), 12115:120210108014 - Dagon Myothit(South) - No(24)(W), 12116:120210126014 - Dagon Myothit(South) - No(106)(W), 12117:120211120007 - Dagon Myothit(North) - No(44)(W), 12118:120212140002 - Dagon Myothit(East) - Sit Pin (South)(W), 12119:120214104013 - Mingala Taungnyunt - Kan Taw Ka Lay (West)(W), 12120:120301112004 - Thanlyin - Myo Ma (South)(W), 12121:120308103004 - Dala - Ant Gyi Ah Nauk(W), 12122:120351104003 - Tada (Sub- Tsp) - No(4)(W), 12123:120406119009 - Kyimyindine - Aye Ywar(W), 12124:120407119016 - Sangyoung - Myay Ni Kone (South)(W), 12125:120410101020 - Mayangon - No(1)(Tha Maing Bu Tar West)(W), 12126:120410106008 - Mayangon - No(6)(Nyar Na Sar Gi)(W), 12327:120102704016 - Mingaladon - Pyin Ma Pin(VT), 12328:120102705026 - Mingaladon - Thin Gan Kyun Gyi(VT), 12329:120103729501 - Hmawby - Nyaung Hnit Pin(VT), 12330:120103739013 - Hmawby - Sat Thwar Taw(VT), 12331:120104739005 - Hlegu - Bar Lar Ta Dar Gyi(VT), 12332:120104747003 - Hlegu - Boe Yin Ka Lay(VT), 12333:120107703001 - Shwepyitha - Kyaung Kone(VT), 12334:120107704011 - Shwepyitha -

Hlaw Kar(VT), 12335:120212703001 - Dagon Myothit(East) - Lay Daunt Kan (East)(VT), 12336:120213702006 - Dagon Myothit(Seikkan) - Nyaung Pin(VT), 12337:120306726011 - Kawhmu - Nat Sin Kone(VT), 12338:120306726012 - Kawhmu - Nat Sin Kone(VT), 12439:120301709002 - Thanlyin - Tha Pyay Kone(VT), 12440:120307716003 - Kungyangon - Taw Kha Yan (West)(VT), 13101:130101119018 - Taunggyi - Kyaung Gyi Su(W), 13102:130101304001 - Taunggyi - Dana Thei Di(W), 13103:130204103002 - Kunhing - No(3)(W), 13104:130401101018 - Lashio - No(1)/Thi Ri Ma Har(W), 13105:130502113002 - Namkham - No(13)(W), 13106:130602102005 - Naungkhio - Bu Tar(W), 13207:130253101003 - Karli(Sub-Tsp) - No(1)(W), 13208:130652104001 - Minelon(Sub-Tsp) - Hkan Ti(W), 13209:130851101001 - Chinshwehaw(Sub-Tsp) - No(1)(W), 13210:131002103004 - Pan San(Pan Kham) - Ward (3), 13211:131101102501 - Kengtung - No(2)(W), 13212:131104101009 - Minelar - Mine Lar Myo Paw 1(W), 13213:131251102001 - Minekoke(Sub-Tsp) - No(2)(W), 13214:131301105002 - Tachileik - Sang Hseng(W), 13215:131301106009 - Tachileik - Mae Khawng(W), 13316:130103706003 - Hopon - Sa Ngaw(VT), 13317:130104708012 - Hsihseng - Par Law Par Kei(VT), 13318:130153710003 - Naungtayar(Sub-Tsp) - Hpa Yar Hpyu(VT), 13319:130201704006 - Loilem - Mong Pun(VT), 13320:130502707002 - Namkham - Nawng Hkam(VT), 13321:130502725001 - Namkham - Tar Kun(VT), 13322:130605714006 - Namsan(North) - Hpa Yar Gyi(VT), 13423:130108703039 - Yatsauk - Yan Twin Ngar Kyaung(VT), 13424:130401712001 - Lashio - Mak Hki Nu(VT), 13425:130605713004 - Namsan(North) - Kyauk Hpyu(VT), 13426:131103702004 - Mineyan - Mong Lway(VT), 14101:140105114013 - Pathein - No (14)(W), 14102:140202102009 - Daydaye - No (2)(W), 14103:140403101002 - Einme - Chaung Wa Paing(W), 14104:140502109003 - Labutta - No (9)(W), 14205:140152103005 - Hainggyikyun (Sub-Tsp) - No (3)(W), 14206:140154104005 - Ngwehsaung(Sub-Tsp) - No (4)(W), 14307:140103731001 - Kyonpyaw - Shar Khe(VT), 14308:140602739004 - Zalun - Kyon Sha(VT), 14309:140603707006 - Myanaung - Nyaung Myit Swea(VT), 14410:140102761002 - Kyaungon - Seik Hpu Ni(VT), 14411:140107760002 - Thapaung - Shwe Yaung Cha(VT), 14412:140203737004 - Phyapon - Kha Naung Shan Kwin(VT), 14413:140302746003 - Danubyu - Taw Kwe(VT), 14414:140402702002 - Wakema - Pauk Tein(VT), 14415:140501808008 - Mawlamyinegyun - Hlaing Bone(VT), 14416:140604717001 - Laymyethna - Shan(VT), 15101:150104101518 - Pobbathiri - Ba Yint Naung(W), 15102:150201101040 - Pyinmana - Ywar Kauk(W), 15303:150104705009 - Pobbathiri - Tha Pay Kone(VT), 15304:150201701014 - Pyinmana - Kin Pun Tan(VT), 15305:150202755025 - Lewe - Aye Lar(VT), 15406:150101748005 - Tatkon - Shwe Maung Gut(VT),

[3] A03_04: A03_04. What is the highest educational qualification acquired by %A02_01%?
Options: 0:attending grade 1, 1:Grade 1 (Kindergarten, Pre-primary), 2:Grade 2 (1st std., Primary), 3:Grade 3 (2nd std., Primary), 4:Grade 4 (3rd std., Primary), 5:Grade 5 (4th std., Primary), 6:Grade 6 (5th std., Middle school), 7:Grade 7 (6th std., Middle school), 8:Grade 8 (7th std., Middle school), 9:Grade 9 (8th std., Middle school), 10:Grade 10 (9th std., High school), 11:Grade 11 (10th std., High school), 12:University/College classes (Tertiary), 13:Vocational trainings, 14:Diploma (Tertiary), 20:Bachelor's Degree (BSc/ BA), 30:Graduate of an institute/ post graduate diploma, 40:Master's/ PhD, 50:Monastic School/other religious school, 60:No Schooling,

[4] A04_03: A04_03. Please describe the kind of trade or business %A02_01%'s main occupation best fits from the list of industries.
Options: 1:A - Agriculture, forestry and fishing, 2:B - Mining and quarrying, 3:C - Manufacturing, 4:D - Electricity, gas, steam and air conditioning supply, 5:E - Water supply; sewerage, waste management and remediation activities, 6:F - Construction, 7:G - Wholesale and retail trade; repair of motor vehicles and motorcycles, 8:H - Transportation and storage, 9:I - Accommodation and food service activities, 10:J - Information and communication, 11:K - Financial and insurance activities, 12:L - Real estate activities, 13:M - Professional, scientific and technical activities, 14:N - Administrative and support service activities, 15:O - Public administration and defense; compulsory social security, 16:P - Education, 17:Q - Human health and social work activities, 18:R - Arts, entertainment and recreation, 19:S - Other service activities, 20:T - Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use, 21:U - Activities of extraterritorial organizations and bodies,

[5] C1: C1. Does your house have the following light buls/ electrical products? Read option
Options: 101:Less than 25W, 102:Incandescent light bulbs (25W to 40W), 103:Incandescent light bulbs (41W to75W), 104:Incandescent light bulbs (76W and above), 201:Fluorescent light tubes (10 W), 202:Fluorescent light tubes (20 W), 203:Fluorescent light tubes (40 W), 301:Compact fluorescent light bulbs (<9 W), 302:Compact fluorescent light bulbs (9W to 15W), 303:Compact fluorescent light bulbs (16W-20W), 304:Compact fluorescent light bulbs (21W to 30W), 305:Compact fluorescent light bulbs (31W to 40W), 306:Compact fluorescent light bulbs (41 W – 50W), 307:Compact fluorescent light bulbs 51W and above, 401:LED light bulbs (<9 W), 402:LED light bulbs (9W to 15W), 403:LED light bulbs (16W-20W), 404:LED light bulbs (21W to 30W), 405:LED light bulbs (31W to 40W), 406:LED light bulbs (41 W – 50W), 407:LED light bulbs 51W and above, 501:Radio/ Radio Cassette, 502:B&W TV, 503:Regular Color TV, 504:Flat color TV (LCD/LED), 505:Satellite dish, 506:Sound equipment, 507:Home Theatre System, 508:Portable EVD Player, 509:VCD/DVD, 601:Fan, 602:Air cooler, 603:Iron, 604:Electric sewing machine, 605:Domestic water pump, 606:Electric charger, 607:Inverter, 608:UPS, 609:Power Surge protector, 610:Refrigerator, 611:Electric water cooler, 612:Air conditioning, 613:Washing machine, 614:Freezer, 701:Rice cooker, 702:Electric pot/ pen, 703:Electric hot water pot/kettle, 704:Hot plate, 705:Electric stove/range/ oven, 706:Micro wave oven, 707:Blender, 708:Toster/Sandwich Maker, 709:Coffee Maker, 801:Computer Desktop, 802:Computer Laptop, 803:Regular cell phone, 804:Smart phone, 805:Tablet, 806:CCTV, 807:Other, specify,

[6] H03_03: H03_03. What is the MAIN fuel you use in this stove?
Options: 1:LPG/cooking gas, 2:Wood purchased, 3:Wood collected, 4:Charcoal, 6:Kerosene, 7:Piped Natural Gas, 8:Coal/lignite, 9:Animal Waste/Dung, 10:Crop Residue/Plant Biomass, 11:Saw Dust, 12:Coal Briquette, 13:Biomass Briquette, 14:Electric, 15:Processed biomass (pellets)/ woodchips, 16:Biogas, 17:Ethanol, 18:Garbage/plastic, 19:Not applicable, 555:Other, specify,

[7] H03_06: H03_06. What is the MAIN fuel you use in this stove?
Options: 1:LPG/cooking gas, 2:Wood purchased, 3:Wood collected, 4:Charcoal, 6:Kerosene, 7:Piped Natural Gas, 8:Coal/lignite, 9:Animal Waste/Dung, 10:Crop Residue/Plant Biomass, 11:Saw Dust, 12:Coal Briquette, 13:Biomass Briquette, 14:Electric, 15:Processed biomass (pellets)/ woodchips, 16:Biogas, 17:Ethanol, 18:Garbage/plastic, 19:Not applicable, 555:Other, specify,

[8] H01_19a: H01_19a. [Most used] In the last 12 months, what are the fuels you used on [STOVE]?
Options: 1:Wood purchased, 2:Wood collected, 3:Charcoal, 4:Solar, 5:Kerosene, 6:Piped Natural Gas, 7:Coal/Ignite, 8:Animal Waste/Dung, 9:Crop residue/Plant Biomass, 10:Saw dust, 11:Coal Briquette, 12:Biomass briquette, 13:Electric, 14:Pellets/Woodchips (processed biomass), 15:Biogas, 16:Ethanol, 17:Garbage/Plastic, 18:Other, specify,

[9] H01_19b: H01_19b. [Second Most used] In the last 12 months, what are the fuels you used on [STOVE]?
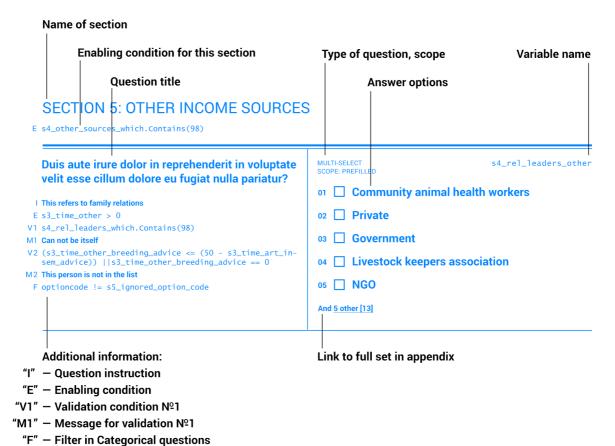Options: 1:Wood purchased, 2:Wood collected, 3:Charcoal, 4:Solar, 5:Kerosene, 6:Piped Natural Gas, 7:Coal/Ignite, 8:Animal Waste/Dung, 9:Crop residue/Plant Biomass, 10:Saw dust, 11:Coal Briquette, 12:Biomass briquette, 13:Electric, 14:Pellets/Woodchips (processed biomass), 15:Biogas, 16:Ethanol, 17:Garbage/Plastic, 18:Other, specify, 777:None,
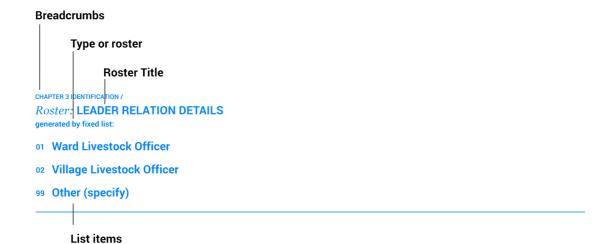
LEGEND

Legend and structure of information in this file

Name of section

Enabling condition for this section   **Type of question, scope**   **Variable name**

Question title   **Answer options**

SECTION 5: OTHER INCOME SOURCES

E s4_other_sources_which.Contains(98)

Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur?

I **This refers to family relations**
E s3_time_other > 0
V1 s4_rel_leaders_which.Contains(98)
M1 **Can not be itself**
V2 (s3_time_other_breeding_advice <= (50 - s3_time_art_in-sem_advice)) ||s3_time_other_breeding_advice == 0
M2 **This person is not in the list**
F optioncode != s5_ignored_option_code

MULTI-SELECT   s4_rel_leaders_other
SCOPE: PREFILLED

01 ☐ **Community animal health workers**

02 ☐ **Private**

03 ☐ **Government**

04 ☐ **Livestock keepers association**

05 ☐ **NGO**

And **5 other [13]**

Additional information:
"I" — Question instruction
"E" — Enabling condition
"V1" — Validation condition №1
"M1" — Message for validation №1
"F" — Filter in Categorical questions

Link to full set in appendix

Breadcrumbs

Type or roster

Roster Title

CHAPTER 3 IDENTIFICATION /
Roster: **LEADER RELATION DETAILS**
generated by fixed list:

01 **Ward Livestock Officer**

02 **Village Livestock Officer**

99 **Other (specify)**

List items