

2017 HOUSEHOLD ENERGY CONSUMPTION SURVEY

PHASE 2 (NOVEMBER)

SECTION A

Identification information										
District										
Constituency										
Community council										
Zone										
Settlement type										
Enumeration Area (EA) Code										
Ward										
Village										
Household Head and Number										
Name of Respondent										
Staff details										
Name of Enumerator										
Date of interview										
Name of Supervisor										
Response Details										
1 Completed										
2 Not Completed										

SECTION B

B		DEMOGRAPHICS									
		PARTICULARS OF ALL PERSONS									
B1. PERSON NUMBER		1	2	3	4	5	6	7	8	9	10
B2. List the members of the household who usually live and eat in this household. Please start with the head of the household. For babies with no names, write <i>BABY</i>.											
B3. What is (name's) relationship to the head of the household?	1 Household Head 2 Spouse/Partner 3 Son/Daughter 4 Son/daughter in-law 5 Step child 6 Sibling 7 Own Parent 8 Parent in-law 9 Grandmother/father 10 Grandchild/Great Grandchild 11 Other relative 12 Not related										
B4. Is (name) a male or a female?	1 Male 2 Female										
B5. How old is (name) in completed years?	<i>Enter age in completed years ("000" for children less than one year old)</i>										
B6. What is (name's) date of birth?	MONTH										
	YEAR										
B7. Has (name) ever attended school? For persons aged 3 years and above	1 Never Attended 2 Still Attending 3 Left school 9 Don't know										
B8. What is the highest level of education that (name) has completed? <i>e.g. 01 Standard 1</i> <i>02 Standard 2 etc.</i>	00 Pre – schools 01- 07 (Std1-7) 11-15 (Form 1-5) 18 None 19 Non-Formal Education 20 Diploma/certificate after primary 21 Vocational training after primary										

	22 Diploma /certificate after secondary										
	23 Vocational training after secondary										
	24 Diploma /certificate after high school										
	25 Vocational after high school										
	26 Graduate										
	27 Post graduate Diploma/Honors										
	28 Masters										
	29 PHD										
	30 Other (Specify)_____										
	88 Not Applicable										
	99 Don't know										

SECTION C

Housing and Household Characteristics

C1. How many housing units does this household have?

C2. Which of the following houses does this household have?

Type of House	No of Rooms	Usable area size (sqM)	Year house occupied	Main Wall Material	Main Roofing Material	Main Floor Material	In order to maintain efficiency, is your house(s) insulated in any way?	If 'Yes' how? (Multiple response)
1 Rontabole 2 Heisi 3 Polata 4 Malaene 5 Optaka 6 Apartment/town house 7 Mansion 8 Bungalow 9 Mok'huk'hu/temporary structure 10 Other (Specify)			1 Before 1966 2 1966- 1975 3 1976- 1985 4 1986- 1995 5 1996-2005 6 2006- 2015 7 After 2015 8 Don't Know	1 Cane/Tree trunk 2 Stick and Mud 3 Masonite 4 Stone with mud 5 Burnt mud bricks 6 Mud bricks/ Makoete 7 Stone with cement 8 Advanced stone 9 Sand/concreet blocks 10 Advanced burnt brick 11 Corrugated iron/metal sheet 12 Other (Specify).....	1 Thatch/grass/straw 2 Corrugated iron/metal sheets 3 Corrugated roof tiles 4 Ceramic/clay tiles 5 Slab 6 Other (Specify).....	1 Mud/dung 2 Laminated board 3 Brick tiles 4 Tiles (ceramic) 5 Cement 6 Vinyl/linoleum 7 Carpet 8 Wood 9 Other (Specify)....	1. Yes 2. No <i>If coded 2, skip to C3</i>	1. Thatch 2. Carpet 3. Ceiling 4. Foam 5. Laminated Board 6. Other (Specify...)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)

C3. What is the ownership status of the house(s) used by the household?		<input style="width: 50px; height: 30px;" type="text"/>
1 Owned by household	2 Free government housing	
3 Free Private housing	4 Subsidized government housing	
5 Subsidized private housing	6 Rented by government	
7 Rented private housing	8 Other (Specify)_____	

SECTION D

Economic Characteristics

D1. How much does the household earn per month? <i>Give total amount of the household earnings</i>		<input style="width: 50px; height: 30px;" type="text"/>
1. None	2. Less than M300	
4. M500 - M999	5. M1, 000 - M1, 999	
7. M5, 000 – M9, 999	8. M10, 000 – M29, 999	
	9. M 30,000 and above	
D2. Did the household receive any remittances/transfers during the warm months (Sept-November)? <i>If no remittances received code 2, and skip to Section E.</i> 1 Yes 2 No		<input style="width: 50px; height: 30px;" type="text"/>
D3. What is the value of the remittances (in Maloti) received during the warm months (Sept-November)?		<input style="width: 50px; height: 30px;" type="text"/>
1. Less than M300	2. M300 - M499	
4. M1, 000 - M1, 999	5. M2, 000 - M4, 999	
7. M10, 000 - M29, 999	8. M 30,000 & above	

SECTION E

BIOMASS

E1. Which of the following Biomass did you use?

Energy sources	Did you use the following energies for housing purposes in the warm months (Sept-November) of the year? 1 Yes 2 No <i>If coded 2, skip to next energy source</i> (a)	How did you mainly obtain the Energy sources you consumed in the warm months (Sept-November) of the year? Self-Production=1 Received for Free=2 Payment in-kind=3 Purchased=4 Collected=5 (b)	The amount spent on energy source in the warm months (Sept-November) of the year? (c)	What are total quantities of energy product used in the warm months (Sept-November) of the year? (d)	Units (e)
1. Charcoal					kg
2. Fuel wood					kg
3. Wood waste					kg
4. Wood chips					kg
5. Wood pellets, briquettes, others					kg
6. Crop waste					kg
7. Animal waste/dung					kg
8. Aloe					kg
9. Shrubs (Sehalahala)					kg
10. Other (Specify).....					

E2. Is there an area where you can collect fuel wood in your community?

If coded 1 in E1a and 1, 3 to 10 in energy sources skip to E8

1. Yes

2. No

E3. Where do you normally source your fuel wood?

If coded 4, skip to E6

1. Communal forest

2. Private Forest

3. Household yard

4. Purchase

5. Other (Specify).....

E4. How long does it take to go from your house to the edge of the main collecting area and back and collect fuel wood? **Time in minutes**

1. 00 - 29

2. 30 - 59

3. 60 - 89

4. 90 - 119

5. 120+

Travel Time

Collecting Time

E5. Which household member(s) was usually involved in fuel wood collection?

(Use the codes in the household roster)

1.....

2.....

3.....

4.....

E6. How much fuel wood do you use per day (kg)?

Wet

Dry

1 Day 1

2 Day 2

E7. What type of fuel wood (litompo, metso/methapo etc) is being collected/purchased in warm months (Sept-November) and how often?

Type of fuelwood	How often do you collect/purchase fuelwood? 0- None 1- One to five times 2- Six to ten times 3- More than ten times	
Logs (Litompo)		<input type="text"/>
Twigs (thupa tse sesanyane)		<input type="text"/>
Roots (Metso/kutu)		<input type="text"/>
Bark of trees (Makhekhebu)		<input type="text"/>
Trees (e.g Poplar, bluewattle)		<input type="text"/>
Other (Specify)		<input type="text"/>
E8. What type of improved fuelwood stove do you use? <i>If coded 6 skip to Section F</i>		<input type="text"/>
1 Rocket Stove 2 Eco-Zoom 3 EnviroTech 4 Save 80 5 ACE 1 Smokeless cookstove 6 None 7 Other (Specify)		
E9. For how long have you been using the improved fuelwood stove? <i>Code "00" for less than a month and skip to E11</i>	Months
E10. Did you notice any of the following difference since using improved fuel wood stove? <i>(give response to each of the options)</i>		
Rating 1 Increased 2 Decreased 3 None		
Fuel Wood	<input type="text"/>	Time taken to cook/heat <input type="text"/>
		Smoke <input type="text"/>
E11. Do you sometimes use other types of biomass as fuel in the stove e.g. cow dung, etc?		<input type="text"/>
1 Yes 2 No		

SECTION F

Electricity

F1. Is your household connected to grid electricity?, Include Meter Number of the household	<input type="text"/>
1 Yes 2 No	Meter Number
F2. Did you use electricity for housing purposes in the warm months (Sept-November) of the year? <i>If coded 2 in F1 and F2, skip to F11.</i>	<input type="text"/>
1 Yes 2 No	
F3. How did you mainly obtain the Electricity you consumed in the warm months (Sept-November) of the year? 1. Received for Free 2. Payment in-kind 3. Purchased 4 None	<input type="text"/>
F4. How much did you spent on electricity in the warm months (Sept-November) of the year?	M.....

F5. What is the main reason for not using grid electricity? <i>For those coded 1 in F1 and 2 in F2.</i>		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div>
1. Expensive 2. Lack of knowledge 3. Fear 4. Disconnected 5. Other (Specify).....		
F6. How long have you been using/connected to grid electricity? <i>(Code 00 for less than 1 year)</i>	Year(s)
F7. What do you use electricity for? (multiple responses) <i>Please tick appropriate answers.</i> <i>For those coded 1 in F2</i>		
1. Cooking/Re-Heating <input type="checkbox"/>	2. Entertainment (e.g. Radio, TV) <input type="checkbox"/>	3. Washing <input type="checkbox"/>
4. Lighting <input type="checkbox"/>	5. Ironing <input type="checkbox"/>	6. Dishwashing <input type="checkbox"/>
7. Sewing <input type="checkbox"/>	8. Air-conditioning <input type="checkbox"/>	9. Computer Powering <input type="checkbox"/>
10. Water Pumping <input type="checkbox"/>	11. Refrigeration <input type="checkbox"/>	12. Charging <input type="checkbox"/>
13. Space Heating <input type="checkbox"/>	14. Water Heating <input type="checkbox"/>	15. Workshop (welding, carpentry, etc) <input type="checkbox"/>
16. Other (Specify)..... <input type="checkbox"/>		
F8. How did you electrify this house? <i>If coded 10, skip to F10</i>		
Type of House 1 Rontabole 2 Heisi 3 Polata 4 Malaene 5 Optaka 6 Apartment/town house 7 Mansion 8 Bungalow 9 Mok'huk'hu/ temporary structure 10 Other (Specify)..... <div style="text-align: right;">(a)</div>	Electrification Method 1 Individual Expenditure 2 Scheme 3 Government 4 Other (Specify)..... 5 Non 6 Not Applicable <div style="text-align: right;">(b)</div>	

F9. What are the major improvements (household-based) as a result of electrification (grid)? (multiple responses)					
1. Improved Lighting	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>	2. Water Heating	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>	3. Faster Cooking	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>
4. Space heating/Air conditioning	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>	5. Entertainment (TV, Radio)	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>	6. Initiated income generating activities	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>
7. None	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>				
8. Other (Specify).....	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>				
F10. Which electrical appliances did you use in your household in the warm months (Sept-November)?					
Ownership	How many do you have?	How long have you been using the appliance? 1 0-5 Years 2 6- 10 Years 3 11- 15 Years	How much did it cost?	What is the power rating of the appliance (Watts)	How many minutes per day is it used?

		4 16- 20 Years 5 21+ Years			
	(a)	(b)	(c)	(d)	(e)
Refrigerator					
Electrical geyser					
Chest /Deep freezer					
Electric stove					
Electric heater					
Washing machine					
Dishwasher					
Tumble dryer					
Hoover					
Hair Dryer					
Television	Plasma				
	LED				
	LCD				
	CRT				
Desktop computer					
Laptop					
Air conditioner					
Iron					
Electric Kettle/element					
Bread Maker					
Toaster					
Microwave					
Electrical pot					
Electrical hair clipper					
Other Specify.....					
None					
F11. What are the reasons for not being connected to grid electricity? For only those coded 2 in F1 1. Lack of funds for wiring 2. Lack of funds for connecting 3. No electricity line 4. Renewable off-grid 5. Conventional off-grid 6.Other (Specify).....					<input type="checkbox"/>

SECTION G

Cooking and Kitchen utensils

G1. What is the source of energy for cooking for the household specifying both main and alternative? <i>If coded 10 for Alternative skip G2 for Alternative.</i> 1. Electricity 2. LPG 3. Biogas 4. Paraffin 5. Crop waste 6. Coal 7. Wood 8. Animal dung 9. Straw/shrubs/grass 10. No alternative 11. Other (Specify).....		Main <input type="text"/> Alternative <input type="text"/>	
G2. How much fuel on average do you use for cooking per month? <i>Please use appropriate units eg. Litres, kg etc exclude fuelwood and electricity by coding "00"</i>		Main <input type="text"/> Alternative <input type="text"/>	
G3. What kind of electrical/gas cooking plate/stove do you mainly use? <i>If coded 5 skip to G6.</i> 1.Spiral 2. Induction/hot plate 3. Gas stove 4.Glass Ceramic plate 5. None 6. Other (Specify).....		<input type="text"/>	
G4. How long has the type of stove been in use? <i>Code "00" for less than a year</i>	 Years	
G5. Does the stove have a Chimney, Hood or Window?		1.Yes <input type="checkbox"/> 2.No <input type="checkbox"/>	
G6. State what usually happens in the household by filling in appropriately	Period		
	Breakfast (a)	Lunch (b)	Dinner (c)
G6i. What type of pots are usually used at the time of cooking? <i>(multiple response)</i> <i>If coded 10 for G6a skip to G6b</i> <i>If coded 10 for G6b skip to G6c</i> <i>If coded 10 for G6c skip to G8</i> 1. Stainless steel pot 2. Aluminium pot 3. Nonstick pot 4. Copper pot 5. Enameled Cast Iron 6. Uncoated Cast Iron 7. Carbon-Steel & Blue Steel 8. Safe 80 pots 9. Electrical pot 10. None			
G6ii. How many pots are used at time of cooking?			
G6iii. What kind of cooking technology/method do you usually use for preparing food? <i>(multiple response)</i> 1. Stove 2. Open fire 3. Prima stove/Paraffin heater 4. Paola 5. None			
G6iv. Type of food usually cooked			
G6v. Type of energy source usually used? <i>(multiple response)</i> 1. Electricity 2. LPG 3. Biogas 4. Paraffin 5. Crop waste 6. Coal 7. Wood 8. Animal dung 9. Straw/shrubs/grass 10. Other (Specify).....			

G6vi. What technique is used for preparing food? (multiple response) 1.Boiling 2.Frying 3.Baking 4.Grilling/Roasting 5.Simmering 6.Other Specify).....			
G6vii. Time taken to cook a meal (minutes)			

G7. Which energy sources and their quantities did you use for cooking per day?

Energy Sources	DAY 1		DAY 2	
	Energy source used (Tick answer)	Quantity used	Energy source used (Tick answer)	Quantity used
1. Electricity				
2. LPG				
3. Biogas				
4. Paraffin				
5. Crop waste				
6. Coal				
7. Wood				
8. Animal dung				
9. Straw/shrubs/grass				
10. None				
11. Other Specify).....				

G8. Do you have a microwave oven?
If coded 2, skip to G12
1 Yes 2 No

☐

G9. How much time (in minutes) in a week do you use the microwave instead of the electric oven for cooking? Write "00" for Reheating and defrosting food.,and skip to G11

..... Minutes

G10. Which answer best describes how frequently your household uses microwave to prepare hot meals and snacks in a typical week?

1. Used to cook most meals and snacks
2. Used to cook about half of meals and snacks
3. To cook a few meals and snacks

☐

G11. Does your household use the microwave for defrosting?
1 Yes 2 No

☐

G12. Do you have an Electric Cooker (slow cooker or pressure cooker)?
If coded 2, skip to section H
1 Yes 2 No

☐

G13. How often do you use Electric Cooker (slow cooker or pressure cooker)?
1. Daily 2. Weekly 3. Monthly 4. Quartely

☐

SECTION H

Heating/Cooling

H1. Did you heat your house(s) in the warm months (Sept-November) of the year? If coded 2, skip to H7 1 Yes 2 No	<input type="checkbox"/>
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<p>H2. Which of the following did your household use for space heating in the warm months (Sept-November) of the year? <i>(multiple response)</i></p>			
<p>1. Gas heater <input style="width: 40px; height: 20px;" type="text"/></p> <p>4. Paraffin heater <input style="width: 40px; height: 20px;" type="text"/></p> <p>7. Open Fire <input style="width: 40px; height: 20px;" type="text"/></p>	<p>2. Coal/Wood stove <input style="width: 40px; height: 20px;" type="text"/></p> <p>5. Paola <input style="width: 40px; height: 20px;" type="text"/></p> <p>8. Electric Heater <input style="width: 40px; height: 20px;" type="text"/></p>	<p>3. Air Conditioner <input style="width: 40px; height: 20px;" type="text"/></p> <p>6. Fireplace <input style="width: 40px; height: 20px;" type="text"/></p> <p>9. Other (Specify)..... <input style="width: 40px; height: 20px;" type="text"/></p>	
<p>H3. What is the main and alternative source of energy for space heating for the household? <i>If coded 1 or 3 as main and 10 as alternative, skip to H6</i> <i>If coded 1 or 3 as Main skip H5 for Main,</i> <i>If coded 1 or 3 as Alternative skip H5 for Alternative.</i></p>			<p>Main <input style="width: 40px; height: 20px;" type="text"/></p> <p>Alternative <input style="width: 40px; height: 20px;" type="text"/></p>
<p>1. Electricity 2. LPG 3. Biogas 4. Paraffin 5. Coal 6. Wood 7. Animal dung 8. Crop waste 9. Straw/shrubs/grass 10. No Alternative 11. Other (Specify).....</p>			
<p>H4. How much fuel did you use for space heating in the warm months (Sept-November) of the year and how much did it cost?</p> <p><i>Please use appropriate units.</i></p>			<p>Main <input style="width: 40px; height: 20px;" type="text"/></p> <p>Cost <input style="width: 40px; height: 20px;" type="text"/></p> <p>Alternative <input style="width: 40px; height: 20px;" type="text"/></p> <p>Cost <input style="width: 40px; height: 20px;" type="text"/></p>
<p>Note: H5 and H6 measurements have to be taken only for rooms that were heated or cooled</p>			
<p>H5. How many square metres (m²) of household area did you heat in the warm months (Sept-November) of the year?</p>			
<p>H6. How many square metres (m²) of household area did you cool in the warm months (Sept-November) of the year?</p>			<p>.....</p>
<p>H7. What is the main source of energy for water heating for the household?</p> <p>1. Electricity 2. LPG 3. Biogas 4. Paraffin 5. Coal 6. Wood 7. Animal dung 8. Crop waste 9. Straw/shrubs/grass 10. Solar water heater 11. Other (Specify).....</p>			<input style="width: 60px; height: 30px;" type="text"/>
<p>H8. Which of the following alternative sources do you use for water heating? <i>(multiple response)</i></p>			
<p>1. Electricity <input style="width: 40px; height: 20px;" type="text"/></p> <p>5. Coal <input style="width: 40px; height: 20px;" type="text"/></p> <p>9. Straw/shrubs/grass <input style="width: 40px; height: 20px;" type="text"/></p>	<p>2. LPG <input style="width: 40px; height: 20px;" type="text"/></p> <p>6. Wood <input style="width: 40px; height: 20px;" type="text"/></p> <p>10. Solar water heater <input style="width: 40px; height: 20px;" type="text"/></p>	<p>3. Biogas <input style="width: 40px; height: 20px;" type="text"/></p> <p>7. Animal dung <input style="width: 40px; height: 20px;" type="text"/></p> <p>11. Other (Specify)..... <input style="width: 40px; height: 20px;" type="text"/></p>	<p>4. Paraffin <input style="width: 40px; height: 20px;" type="text"/></p> <p>8. Crop Waste <input style="width: 40px; height: 20px;" type="text"/></p>

SECTION I

Lighting

I1. What is the main and alternative source of energy for lighting for the household? <i>For those coded 1 to 4 as main and 10 as alternative skip to I3</i> <i>For those coded 1 to 6 as main skip I2 for main</i> <i>For those coded 1 to 6 as alternative, skip I2 for alternative</i> <i>For those coded 5 or 6 as main and 10 as alternative skip to Section J</i>				Main <input type="checkbox"/> Alternative <input type="checkbox"/>
1. Electricity (Grid) 2. Electricity (Generator) 3. Electricity (Battery) 4. Rechargeable Battery Lamps 5. Solar Lantern 6. Electricity (Solar) 7. LPG 8. Candle 9. Paraffin 10. None 11. Other (Specify).....				
I2. How much energy source did you use for lighting in the warm months (Sept-November)? <i>Please use appropriate units.</i>				Main <input type="text"/> Alternative <input type="text"/>
I3. What type of light bulb do you use? (<i>multiple responses</i>) For those coded 1 to 4 in I1				
Type of Bulb	How many do you have? (a)	What is the capacity of the bulb? (b)	How many minutes are they switched on per day? (c)	
Energy saver (compact florescent)				
Florescent tube				
Incandescent (Ordinary) globes				
LED (Light Emitting Diode)				
Other (Specify).....				

SECTION J

Access to Automobiles

NB: Only light-duty passenger vehicles and recreation vehicles are included in this survey
(**exclude large trucks, motor cycles, buses, tractors**)

J1. Did this household have access to a car (family owned, hired or borrowed) in the warm months (Sept-November) of the year ? <i>If coded 2 skip to Section K</i> 1 Yes 2 No			<input type="text"/>
J2. What make of a car(s) did the household have access to in the warm months (Sept-November) of the year? Fill in accordingly information pertaining to cars that were used.			
Make of Car (a)	Type of Fuel used by the car 1.Diesel 50ppm 2.Diesel 500ppm 3.Lead replacement petrol 4.Unleaded petrol (b)	Amount of Money used on Fuel (Maloti) (c)	Amount of Fuel used (Litres) (d)
J3. Which of the following lubricants did the household use in the warm months (Sept-November) of the year? <i>Fill in appropriately. Include only lubricants used in the car</i>			
Type of lubricant	Quantity (a)	Amount of Money (Maloti) (b)	
Motor oil (litres)			
Brake fluid (litres)			
Grease (kilograms)			
Other (Specify).....			

SECTION K

Solar Energy Usage

K1. Do you own a Solar Photovoltaic (PV) system(s)? 1 Yes 2 No	<input type="text"/>
K2. Did you use Solar PV for housing purposes in the warm months (Sept-November) of the year? <i>If coded 2 in K1 and coded 1 or 2 in K2, skip to K12</i>	<input type="text"/>

1 Yes 2 No			
K3. How did you obtain the Solar PV? <div style="display: flex; justify-content: space-around; margin-top: 5px;"> 1. Received for Free 2. Payment in-kind 3. Purchased </div>		<input style="width: 50px; height: 20px;" type="text"/>	
K4. Did you ever receive information on how the Solar PV works or can be used? 1 Yes 2 No		<input style="width: 50px; height: 20px;" type="text"/>	
K5. What kind of solar PV system(s) do you have? <i>Multiple response</i>			
1. Installed solar home system <input style="width: 50px; height: 20px;" type="text"/> 3. Panel with a battery <input style="width: 50px; height: 20px;" type="text"/> 5. Solar for water pumping <input style="width: 50px; height: 20px;" type="text"/>		2. Pre-wired solar system <input style="width: 50px; height: 20px;" type="text"/> 4. Mini grid <input style="width: 50px; height: 20px;" type="text"/> 6. Other (specify)..... <input style="width: 50px; height: 20px;" type="text"/>	
K6. Give the number of solar panels owned by the household and their capacities. <i>If coded 2 for all in column c, skip to K12.</i> Note: For panels with the same wattage, write the number of such panels and capacity of ONLY one solar panel. Panels should be functional in the warm months (Sept-November)			
Number of panels (a)	Capacity of panel (watts) (b)	Functionality 1 Yes 2 No (c)	
K7. What was the cost of the whole system(s)? <i>Including cost of installation if applicable</i> M.....			
K8. Which year was the main system obtained?			
K9. Was the main system subsidised? 1 Yes 2 No	<input style="width: 50px; height: 20px;" type="text"/>		
K10. What do you use solar PV for? Tick appropriately (<i>multiple response</i>) if not coded 1, skip to K12 <div style="display: flex; flex-wrap: wrap; margin-top: 5px;"> <div style="width: 33%;">1. Lighting <input style="width: 40px; height: 20px;" type="text"/></div> <div style="width: 33%;">2. Phone charging <input style="width: 40px; height: 20px;" type="text"/></div> <div style="width: 33%;">3. Water Pumping <input style="width: 40px; height: 20px;" type="text"/></div> <div style="width: 33%;">4. Appliance: radio, TV, etc. <input style="width: 40px; height: 20px;" type="text"/></div> <div style="width: 33%;">5. Other (Specify)</div> <div style="width: 33%;">6. None <input style="width: 40px; height: 20px;" type="text"/></div> </div>			
K11. What types of bulbs are connected to the PV System? Note: <i>Aggregate bulbs of similar capacity. for example, in a household where there are 2 bulbs of 11 watts, then under number, record 2 and under capacity record 11.</i>			
Type of Bulb	How many do you have? (a)	What is the Capacity (watts)? (b)	How many minutes are they turned on per day? (c)
Energy saver (compact florescent)			
Florescent tube			
Incandescent (Ordinary) globes			
LED (Light Emitting Diode)			
Other (Specify)			

Solar Water Heating

K12. Do you have a solar water heater (geyser)? <i>If coded 2 skip to Section L</i>						<input type="text"/>
1 Yes 2 No						
K13. Give the number of solar water heating systems owned by the household and their capacities.						
Note: For solar water heating systems bearing the same characteristics write the number of such and fill in characteristics of ONLY one solar water heating system.						
Number of solar water heating systems (a)	What is the capacity of a solar water heater? Volume (in Litres) (b)	What is the collector area (Aperture area) of the solar water heater? Give area in cm ² (c)	What was the cost of the whole system (including cost of installation)? (d)	Which year was the system installed? (e)	Is the solar water heating system functional? 1 Yes 2 No If coded 2, skip to section L (f)	Do you have electrical backup for the solar water heating system? 1 Yes 2 No (g)

SECTION L

Generators

L1. Did the household own a functional generator in the warm months (Sept-November)?					<input type="text"/>
1 Yes 2 No					
L2. Did the household use a generator in the warm months (Sept-November)? <i>If coded 1 in L1 and 2 in L2, skip to L4</i> <i>If coded 2 in L1 and 2 in L2 skip to Section M</i>					<input type="text"/>
1 Yes 2 No					
L3. What did you use the generator for? (<i>Multiple response</i>)					
1. Lighting	<input type="text"/>	2. Powering electrical appliances (radio, TV etc.)	<input type="text"/>		
3. Irrigation purposes	<input type="text"/>	4. Other (Specify).....	<input type="text"/>		
L4. What is the brand of the generator? Fill appropriately.					
Note: For generators bearing the same characteristics write the number of such and fill in characteristics of ONLY one generator.					
Brand (a)	Number of generators (b)	Capacity (kVA) of each generator (c)	Type of Fuel used 1.Diesel 50ppm 2.Diesel 500ppm 3.Leadreplacement petrol 4.Unleaded petrol (d)	Litres consumed in the warm months (Sept-November) (e)	How much did it cost? (Maloti) (f)

SECTION M

General Energy Use

M1. What form of energy would you appreciate to be availed to you?			<input type="checkbox"/>
1. Electricity (grid)	2. LPG	3. Wood	
5. Solar PV	6. Bio-gas	7. None	8. Other (Specify).....
M2. Did the household use any garden appliances in the warm months (Sept-November)? <i>If coded 2 skip to Section N.</i>			<input type="checkbox"/>
1 Yes 2 No			
M3. What energy source and quantity did the household use in any of the following garden appliances in the warm months (Sept-November)?			
Garden Appliances	Type of energy source 1.Diesel 50ppm 2.Diesel 500ppm 3.Lead replacement petrol 4.Unleaded petrol (a)	Quantity (litres) (b)	
1 Chain saw			
2 Lawn mower			
3 Garden blower			
4 Other (Specify).....			

SECTION N: Other Energy Sources

N1. Which of the following energy sources did you use?

Energy sources	Did you use the following energies for housing purposes in the warm months of the year? 1 Yes 2 No (a)	How did you mainly obtain the Energy sources you consumed in the warm months of the year? Self-Production=1 Received for Free=2 Payment in-kind=3 Purchased=4 Collected=5 (b)	The amount (Maloti) spent on energy source in the warm months of the year? (c)	What are total quantities of energy product used in the warm months of the year? (d)	Units (e)
Liquid petroleum gas					kg
Coal					kg
Kerosene/ paraffin					Lit
Biogas					
Other (Specify).....					

N2. Are there any plans to upgrade the house in the next 2-3 years to reduce energy use by doing the following: *(multiple response)*

If coded 2 in all go to N3

If coded 1 in any of the responses, don't answer N3

1 Yes 2 No

1. Replace the light bulbs: 1(a) with CFL ☐ 1(b). with LED ☐ 2. Install a Solar Water Heater ☐
3. Install a PV system ☐ 4. Insulate the walls ☐ 5. Replace the windows ☐
6. Fit a ceiling ☐

N3. What are the constraints against making any of the above investments? *(multiple response)*

For ONLY those coded 2 in N2

1. I do not own the house ☐ 2. Low income ☐ 3. Low quality of products ☐
4. High purchasing costs ☐ 5. High interest rates on commercial loans ☐
6. High installation / labour costs ☐ 7. Lack of device on local market ☐
8. Don't know which is best choice ☐ 9. I do not know about these technologies ☐
10. Not connected to electricity ☐ 11. Other (specify): _____