Energy Access Survey

**Introduction to the Household Head**

*[Interviewer shows ID card to the respondent]*

I work with MORSEL, an organization based in Lucknow that conducts surveys in India. Your household has been selected to participate in a short survey. The survey is a Council on Energy, Environment and Water / Columbia University study and is led by Dr. Johannes Urpelainen. It will take around 45 minutes. Would you like to participate?

1. Did the household head agree to be interviewed? 1 Yes 0 No
2. If no, record the reason: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **A. MetaData**

1. Household ID \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. ID and Name of Interviewer ID \_\_\_ NAME \_\_\_\_\_\_\_\_\_
3. ID and Name of Supervisor ID \_\_\_ NAME \_\_\_\_\_\_\_\_\_
4. Date of Interview \_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Interview start time \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Interview end time \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Geographic Information**

1. State \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. District \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Block \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Village \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Habitation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   [ASK VILLAGE HEAD IF NEEDED]
6. Full Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Mobile Contact Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. GPS Latitude \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. GPS Longitude \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **B. Household Head and Roster**

*Obtain the following information from the household head. If the household head is NOT available, interview another adult member of the household.*

1. Relationship to household head 1 Self 2 Spouse  
    3 Mother/father 4 Son/Daughter  
    5 Other, specify \_\_\_\_\_\_\_\_\_\_
2. Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Age \_\_\_\_\_\_\_\_\_\_\_\_\_\_ [YEARS]
4. Gender 1 Male 0 Female
5. Native language \_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Read and write native language? 1 Yes 0 No
7. Level of education of the household head

1 No formal schooling 2 Up to 5th standard 3 Up to 10th standard

4 12th standard or diploma 5 Graduate and above

1. Religion 1 Hindu 2 Muslim 3 Other
2. Government Caste 1 Scheduled Caste 2 Scheduled Tribe  
    3 Other Backward Class 4 General   
    5 Others 6 No Caste
3. Which ration card does your household have?

0 None 1 APL 2 BPL 3 Antyodaya

1. Number of adults living in this household permanently (as of now)\_\_\_\_\_\_\_\_\_\_\_\_ [NUMBER]
2. How many members in the family have a voter ID card? \_\_\_\_\_\_\_\_ [NUMBER]
3. Number of children (0-18 years) permanently living in the household (as of now) \_\_\_\_\_\_\_\_\_\_\_\_ [NUMBER]
4. How many children are currently studying? \_\_\_\_\_\_\_\_\_\_\_\_ [NUMBER]

## **C. Economic Activity**

1. What is the primary source of income in your family?

1 Agriculture on own land 2 Cultivation on leased land 3 Casual agricultural labor  
4 Salaried job 5 Cattle rearing 6 Own business  
7 Daily laborer 8 Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [SPECIFY]

1. How much is your expenditure on household needs in a typical month?\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [RUPEES]
2. How many rupees did your household save last year?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [RUPEES]
   1. If your household did not save money, how much do you need to borrow in a typical year? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [RUPEES]
3. Does anyone in your household have a bank account? 1 Yes 0 No
4. Is your household currently indebted? 1 Yes 0 No

35.1 **IF YES**: How much in total? \_\_\_\_\_ RUPEES

35.2 **IF YES**: What is the monthly interest rate of your largest loan? \_\_\_\_\_ PERCENT

1. How much land does your household own? \_\_\_\_\_\_\_\_\_\_\_ [0 if none] \_\_\_\_\_\_\_\_\_\_\_\_ [UNIT]
2. How many cattle and livestock do you own?

\_\_\_ COWS \_\_\_ BUFFALOES \_\_\_ FOWLS/CHICKEN

\_\_\_ COW CALVES \_\_\_ BUFFLOES CALVES

\_\_\_ GOATS \_\_\_ OTHER ANIMALS

1. Who in your household makes decisions on purchase of durable goods?

1 Male head of household 2 Female head of household 3 Jointly 4 Other, specify: \_\_\_\_\_\_

1. Is the house you live in *pucca*? 1 Pucca 2 Mixed 3 Kaccha
2. Do you own your house? 1 Yes 0 No
3. Does your household have a toilet? 1 Yes 0 No
4. Does your household have piped water? 1 Yes 0 No
5. How many rooms does your house have? \_\_\_\_ [NUMBER]
6. How many beds does your household own? \_\_\_\_ [NUMBER]
7. How many tables does your household own? \_\_\_\_ [NUMBER]
8. How many chairs does your household own? \_\_\_\_ [NUMBER]
9. How many bicycles does your household own? \_\_\_\_ [NUMBER]
10. How many motorcycles does your household own? \_\_\_\_ [NUMBER]
11. How many pressure cookers does your household own? \_\_\_\_ [NUMBER]

**(\*\*Only for those HHs who are indulge in agriculture)**

1. Do you use pumps for irrigation? 1 Yes 0 No (skip to 50.2)

**IF YES**:

**50.1.** What type of pump?

1 Diesel pump 2 Electric pump 3 Both diesel and electric

**IF NO:**

**50.2.** Would you like to use an electric pump? 1 Yes 0 No

1. How satisfied are you with the current situation of electricity for your agriculture business?

1 Unsatisfied 2 Neutral 3 Satisfied

**(\*\* for all Households)**

1. Do you or any other member of your family running a business activity (other than agriculture)?

1 Yes 0 No **(Skip to53)**

**IF YES**

* 1. Do you use electricity for your business? 1 Yes 2. No **(skip to 52.1.2)**

**IF YES**

* + 1. How satisfied are you with the current situation of electricity for your business?

1 Unsatisfied 2 Neutral 3 Satisfied

**IF NO**

* + 1. Can or has electricity contributed to increasing your income from your primary occupation?

1 Yes 0 No

**(\*\*only to households who indulge in agriculture and no other business activity)**

1. Would you be interested in running a business activity (other than agriculture) in future?

1 Yes 0 No **(Skip to55)**

1. How important would be electricity for your future business activity?
2. Very important 2. Somewhat important 3. Not important

**1. Lighting and Electricity Situation**

1. Do you use grid electricity for lighting? 1 Yes 0 No **(Skip to 56)**

***IF YES*:**

55.1. How many years ago was your house connected to the grid?

\_\_\_\_ [YEAR AGO] [*NA* if house already had electricity when the respondent moved in; DK if the respondent doesn't remember or doesn’t know]

55.2. What was the connection fee?

\_\_\_\_\_ [RUPEES] [*NA* if house already had electricity when the respondent moved in; DK if the respondent doesn't remember or doesn’t know]

55.3. What is your total electricity spending per month? \_\_\_\_ [RUPEES/MONTH]

55.4. Do you have a meter? 1 Yes 0 No

55.5. Do you pay a fixed or variable amount monthly?

0 Variable 1 Fixed 2 No Payment

1. Have you heard about micro-grids? 1 Yes 0 No

[\*\*\* ENUMERATOR: READ THE TEXT BELOW REGARDLESS OF ANSWER, SHOW PICTURE\*\*\*]

*Micro-grids are systems that generate electricity and distribute it at the local level. Electricity can be produced from solar energy, micro-hydro, diesel or some other source. The electricity can then be used by local users. It provides limited but reliable electricity supply compared to the grid electricity in rural India.*

1. If the monthly bill for both options were the same, would you prefer your household to be electrified through a micro-grid system or through the regular grid?

0 Regular grid 1 Micro-grid DK Don’t know

1. Do you use micro-grid for lighting? 1 Yes 0 No **(Skip to 59)**

***IF YES*:**

58.1. Is it powered through:

1 Solar 2 Diesel  
3 Biomass gasification 4 Micro-hydro

58.2. What is your total spending for micro-grid electricity per month?   
\_\_\_\_\_\_ [RUPEES/MONTH]

58.3. Do you have a meter? 1 Yes 0 No

58.4. Do you pay a fixed or variable amount monthly?

1 Fixed 0 Variable 2 No Payment

58.5. How much did you have to pay upfront for the micro grid connection?

\_\_\_\_ [RUPEES] [*NA* if house already had electricity when the respondent moved in; DK if the respondent doesn't remember or doesn’t know]

1. Have you heard about solar home systems? 1 Yes 0 No

[\*\*\* ENUMERATOR: READ THE TEXT BELOW REGARDLESS OF ANSWER, SHOW PICTURE\*\*\*]

*Sunlight can be used to produce electricity through solar home systems and will provide electricity only for your household. The energy from sunlight is captured by solar panels, which are typically installed on a house's rooftop, and is then transformed into electricity. This electricity can be stored in batteries and then be used whenever you want. The system life is 3-5 years and recurring costs are approximately zero. The company provides a maintenance guarantee.*

***IF YES:***

1. Do you use solar home system or solar lanterns for lighting?

1 Solar home system 2 Solar lantern 3 both 4 Neither **(Skip to 61)**

***IF 1, 2, or 3*:**

60.1. How many hours of lighting per day do you get from it? \_\_\_\_\_ [HOURS/DAY]

60.2. Is it rented or owned? 0 Rented 1 Owned

***IF RENTED***:

60.3. How many rupees does it cost you per month? \_\_\_\_\_ [RUPEES/MONTH]

***IF OWNED:***

60.4. How many rupees did it cost you? \_\_\_\_\_\_ [RUPEES]

60.5. How much subsidy did you receive? \_\_\_\_\_\_ [RUPEES]

60.6. What is the loan did you take? \_\_\_\_\_\_ [RUPEES]

60.7. What is the term of the loan? \_\_\_\_\_\_ [MONTHS]

60.8. What is the per month installment? \_\_\_\_\_\_ [Rupees/month]

1. Do you use kerosene lamps for lighting? 1 Yes 0 No **(Skip to 62)**

***IF YES*:**

61.1. How many kerosene wick lamps do you use? \_\_\_\_\_\_\_\_\_\_ [LAMPS]

61.2. How many kerosene lanterns do you use? \_\_\_\_\_\_\_\_\_\_ [LANTERNS]

61.3 How many hours a day do you use kerosene lamps for lighting?

\_\_\_\_\_ [HOURS/DAY] (\*\*cumulative sum\*\*)

61.4. How many liters of kerosene do you buy from PDS per month? \_\_\_\_\_ [LITERS/MONTH]

61.5. What is the price you pay for PDS kerosene? \_\_\_\_\_\_\_\_\_ [RUPEES/LITER]  
 [DO NOT USE ZERO HERE – CODE “DK” IF DON’T KNOW]

61.6. How many liters of kerosene do you buy from the market per month? \_\_\_\_\_ [LITERS/MOMTH]

61.7. What is the price you pay for market kerosene? \_\_\_\_\_\_\_\_\_ [RUPEES/LITER]  
 [DO NOT USE ZERO HERE – CODE “DK” IF DON’T KNOW]

61.8. In your opinion, do kerosene fumes have an effect on your health? 1 Yes 0 No 2 DK

61.9. Do you use kerosene for anything other than lighting? 1 Yes 0 No

**(IF NO, Skip to 62)**

***IF YES*:**

61.10. What for? SPECIFY [ONLY NON-LIGHTING USAGE] \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

61.11. How many liters/month do you use for this? [LET RESPONDENT ANSWER; DON'T MAKE SUGGESTIONS] \_\_\_\_\_ [LITERS/MONTH]

**[ALL HOUSEHOLDS]**

1. Do you use any other source for daily lighting needs regularly?
2. Diesel generator 2 Rechargeable lamps 3 Others [SPECIFY]:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. No other source
3. What do you use artificial lighting for?

64.1 Home business 1 Yes 0 No

64.2 Meeting with friends and family 1 Yes 0 No

63.3 Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. For how many hours artificial lighting is used for reading (reading books, newspapers, studying, etc.) on an average per day? [Insert values in hours not hours/minutes]

\_\_\_\_\_\_\_\_\_ Children [0-24 HOURS PER CHILD]

\_\_\_\_\_\_\_\_\_ Adults [0-24 HOURS PER ADULT]

1. How many hours per day do you listen to the radio? \_\_\_\_\_\_\_ [0-24 HOURS]
2. How many hours per day do you watch television? \_\_\_\_\_\_\_ [0-24 HOURS]
3. Do you own a mobile phone? 1 Yes 0 No **(Skip to 68)**

*IF YES:*

* 1. How many mobile phones does your household have? \_\_\_\_\_ [NUMBER]

67.2 How much per month do you pay for charging the phone battery? \_\_\_\_\_ [RUPEES]

1. *[\*\*\* ENUMERATOR: FILL IN WITHOUT ASKING RESPONDENT \*\*\*]*

*[\*\*\* Does the household have any electricity (whether from the grid, from a solar household system, from a diesel generator, or from a micro grid) \*\*\*]*

1 Yes 0 No

***(IF “YES”, GO TO 69 (Electrified Households); IF “NO”, GO TO 79 (Non-Grid Households)***

**\*\*\* Electrified Households**

**[HOUSEHOLDS THAT HAVE GRID, SOLAR HOUSEHOLD SYSTEM, DIESEL GENERATOR, OR MICRO GRID]**

1. How many hours a day is electricity usually available? \_\_\_\_\_ [HOURS/DAY]
2. For how many hours is electricity usually available between sunset and midnight (till 12 o’ clock)? \_\_\_\_\_ [0 – 6 HOURS]
3. How many days in the last month has there been no power throughout the day? \_\_\_\_ [0-30 DAYS]
4. How many days in a month have you experienced that electric equipment suffered because of voltage fluctuation? \_\_\_\_\_\_\_\_ [0-30 DAYS]
5. How many days a month have you experienced that voltage was too low to run appliances? \_\_\_\_\_\_\_\_ [0-30 DAYS]
6. Whom do you currently pay for your primary source of electricity?

0 Representative of electricity department 1 Village energy committee / Village head

2 Neighbor or relative 3 No one / no need to pay

4 Don’t know where to pay 5 Others (SPECIFY) \_\_\_\_\_\_\_\_\_\_\_\_

1. How many of the following items/ appliances do you USE?

75.1. Incandescent bulbs? \_\_\_\_ [NUMBER]

75.2. CFL bulbs \_\_\_\_ [NUMBER]

75.3. LED lights? \_\_\_\_ [NUMBER]

75.4. Tube light? \_\_\_\_ [NUMBER]

75.5. Fans? \_\_\_\_ [NUMBER]

75.6. Electric iron? \_\_\_\_ [NUMBER]

75.7. Refrigerator? \_\_\_\_ [NUMBER]

75.8. Television? \_\_\_\_ [NUMBER]

75.9. Electric Radio/Music System? \_\_\_\_ [NUMBER]

75.10. Cooler? \_\_\_\_ [NUMBER]

75.11. Washing machine? \_\_\_\_ [NUMBER]

75.12. Electric stove? \_\_\_\_ [NUMBER]

75.13. Inverter? \_\_\_\_ [NUMBER]

75.14. Electric Water Pump \_\_\_\_ [NUMBER]

75.15. Others? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_ [NUMBER]

75.16. Others? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_ [NUMBER]

1. Which of the following appliances would you want to use, but are unable to use **only** because of the limited supply or poor quality of electricity?

**(\*\*If there is good electricity available, code NA and move to 77\*\*)**

76.1. Fans? 1 Yes 0 No 2 Already Using

76.2. Electric iron? 1 Yes 0 No 2 Already Using

76.3. Refrigerator? 1 Yes 0 No 2 Already Using

76.4. Television? 1 Yes 0 No 2 Already Using

76.5. Electric Radio/Music System? 1 Yes 0 No 2 Already Using

76.6. Cooler? 1 Yes 0 No 2 Already Using

76.7. AC? 1 Yes 0 No 2 Already Using

76.8. Electric stove? 1 Yes 0 No 2 Already Using

76.9. Computer/Laptop 1 Yes 0 No 2 Already Using

76.10. Washing machine? 1 Yes 0 No 2 Already Using

76.11. Electric Water Pump 1 Yes 0 No 2 Already Using

76.12. Other\_\_\_\_\_\_\_\_\_\_\_\_

76.13. Other\_\_\_\_\_\_\_\_\_\_\_\_

***IF ANY OF ABOVE IS YES:***

76.14. If you were able to use all the appliances you desire as stated above, how much would you be willing to pay monthly for this overall usage? \_\_\_\_\_\_\_ [RUPEES/MONTH]

1. Generally, how satisfied are you with the electricity situation in your household?

1 Unsatisfied 2 Neutral 3 Satisfied

**IF “1 UNSATISFIED”**

1. Why are you unsatisfied? [CHECK ALL THAT APPLY]
   1. Too expensive to consume 1 Yes 0 No
   2. Not available when you need it 1 Yes 0 No
   3. Poor quality (voltage fluctuations) 1 Yes 0 No
   4. Poor maintenance and repair services 1 Yes 0 No
   5. Other, SPECIFY: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\*\*\* [*NON-ELECTRIFIED HOUSEHOLDS*] \*\*\***

1. If you had grid electricity, what would you use it for [DON’T READ OUT THE OPTIONS, MARK THE FIRST THREE RESPONSES AS 1,2,3 – AFTER THAT READ LEFT OUT OPTIONS AND MARK YES/NO]

79.1. Lighting? 1 Yes 0 No \_\_\_

79.2. Fans? 1 Yes 0 No \_\_\_

79.3. Electric iron? 1 Yes 0 No \_\_\_

79.4. Refrigerator? 1 Yes 0 No \_\_\_

79.5. Television? 1 Yes 0 No \_\_\_

79.6. Radio? 1 Yes 0 No \_\_\_

79.7. Cooler? 1 Yes 0 No \_\_\_

79.8. AC? 1 Yes 0 No \_\_\_

79.9. Electric stove? 1 Yes 0 No \_\_\_

79.10. Computer/Laptop 1 Yes 0 No \_\_\_

79.11. Washing machine? 1 Yes 0 No \_\_\_

79.12 Water Pump 1 Yes 0 No

79.13. Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [SPECIFY]

1. Up to how much would you be willing to spend per month for such usage?  
   \_\_\_\_\_\_ [RUPEES/MONTH]

**\*\*\*[ ALL *NON-GRID HOUSEHOLDS*]\*”\***

1. Is grid electricity available in your habitation? 1 Yes 0 No

***IF YES:***

If it is available, then why don't you have grid electricity?

81.1. Is the connection too expensive? 1 Yes 0 No

81.2. Is the monthly bill too expensive? 1 Yes 0 No

81.3. Is it too unreliable? 1 Yes 0 No

81.4. Don’t know how to get or whom to ask? 1 Yes 0 No

81.5. Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [SPECIFY]

1. Are you interested in having grid electricity? 1 Yes 0 No

82.1 What amount are you willing to pay to get electricity connection? \_\_\_\_ [RUPEES]

## **2. Lighting and Electricity Satisfaction**

1. What is the primary source of lighting in your HH?

1 Grid electricity 2 Kerosene lamp/lantern 3 Micro-grid   
4 Solar home system or solar lantern 5. Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. This primary lighting source that you are using:

84.1. Is it adequate to use? 1 Yes 0 No

84.2. Is it reliable? 1 Yes 0 No

84.3. Is it expensive to use? 1 Yes 0 No

84.4. Is it safe to use? 1 Yes 0 No

1. So, overall how satisfied are you with the primary source of lighting in your home?

1 Unsatisfied 2 Neutral 3 Satisfied

1. Compared to 5 years ago, has your satisfaction about lighting in your home:

1 Decreased 2 Remained the same 3 Increased

1. How important is the provision of electricity at community places like schools or chaupal for you?

1 Very important 2 Neutral 3 Not important 99 Don’t know

1. Generally, how satisfied are you with the electricity at community places like schools/chaupals?

1 Unsatisfied 2 Neutral 3 Satisfied 99 Don’t know

1. How many rupees would you be willing to pay to provide 5 hours per day of community electricity? \_\_\_\_\_\_ [RUPEES/MONTH]
2. How important is street lighting for you?

1 Very important 2 Neutral 3 Not important 99 Don’t know

1. How many rupees would you be willing to pay to provide street lighting in your habitation?

\_\_\_\_\_\_ [RUPEES/MONTH]

1. Would (or does) street lighting increase safety in your habitation?

1 Yes 0 No 99 Don't know

1. Generally, how satisfied are you with the village's street lighting?

1 Unsatisfied 2 Neutral 3 Satisfied

1. Rank the following in order of importance for you [1-4, WITH 1 HIGHEST AND 4 LOWEST]:

94.1. Electrification of households \_\_\_

94..2. Street lighting \_\_\_

94..3. Electricity for productive usage \_\_\_

94..4. Electrification of community spaces \_\_\_

1. Do you think people in your village steal electricity?  
   1 Yes 0 No 99 Don’t know 999 Not applicable/not available
2. Do you think stealing electricity is illegal?

1 Yes 0 No 99 Don’t know 999 Not applicable/not available

1. Do you think such stealing should be stopped?  
   1 Yes 0 No 99 Don’t know 999 Not applicable/not available
2. How many rupees per month would you be willing to spend for electricity that is available as per your need and would allow you to get artificial light for 12 hours a day, use a fan for 8 hours a day, and charge your mobile phone? \_\_\_\_\_\_ [RUPEES PER MONTH]

# **3. Cooking Situation**

**[\*\*\*ENUMERATOR: FOR THIS SECTION, PLEASE INVITE THE HOUSEHOLD’S PRIMARY COOK TO JOIN THE INTERVIEW EVEN IF NOT HOUSEHOLD HEAD\*\*\*]**

1. [\*\*\*DON’T ASK, FILL YOURSELF\*\*\*] Able to interact with the primary cook?

1 Yes 0 No

1. How many meals are cooked in your house every day? \_\_\_\_\_\_\_\_\_ [NUMBER]
2. How much time is spent in cooking per day? \_\_\_\_\_\_\_\_\_ [HOURS/DAY]
3. Do you use domestic gas (LPG) for cooking? 1 Yes 0 No **(Skip to 105)**

***IF YES*:**

* 1. How many years ago did your house begin to use LPG? \_\_\_\_\_\_\_\_\_\_\_\_ [YEARS AGO]
  2. How much did it cost to install the LPG connection? \_\_\_\_\_\_\_\_\_\_\_\_ [RUPEES]

103.3. What all do you cook using LPG?

1. Only chapattis/roti 2 Only vegetables and lentils 3 Rice

4 Only tea/snacks 5 milk boiling 6 water boiling 7. Other (SPECIFY)\_\_\_\_\_\_\_\_\_\_

* 1. How many large LPG cylinders do you use in a year? \_\_\_\_\_ [NUMBER/YEAR]
  2. How many large cylinders do you get from authorized distributors?\_\_\_\_\_ [NUMBER/YEAR]
  3. How many large cylinders do you get from market? \_\_\_\_\_ [NUMBER/YEAR]
  4. How many small LPG cylinders do you use in a year? \_\_\_\_\_ [NUMBER/YEAR]
  5. How many small cylinders do you get from authorized distributors? \_\_\_\_[NUMBER/YEAR]
  6. How many small cylinders you get from market? \_\_\_\_\_ [NUMBER/YEAR]
  7. How much does a large cylinder of LPG from authorized distributors cost? \_\_\_\_\_ [RUPEES/CYLINDER] [If the respondent does not know the answer write “DK”]
  8. How much does a small cylinder of LPG from authorized distributors cost? \_\_\_\_\_ [RUPEES/CYLINDER][If the respondent does not know the answer write “DK”]
  9. How much does a large cylinder of LPG from market cost? [DK IF RESPONDENT DOESN'T KNOW OR IF TAKES TOO LONG TO FIND OUT] \_\_\_\_\_\_\_ [RUPEES/CYLINDER]
  10. How much does a small cylinder of LPG from market cost? [DK IF RESPONDENT DOESN'T KNOW OR IF TAKES TOO LONG TO FIND OUT] \_\_\_\_\_\_ [RUPEES/CYLINDER]
  11. Is the domestic gas cylinder delivered at your door step? 1 Yes 0 No

***IF NO:***

* 1. What is the one-way distance in kilometers your household typically travels to get LPG? \_\_\_\_\_\_ [KM]

1. Generally, how satisfied are you with the LPG situation in your household?  
    1 Unsatisfied 2 Neutral 3 Satisfied

**IF UNSATISFIED**

* 1. Why are you unsatisfied?

1 Too expensive to consume 1 Yes 0 No

2 Poor availability 1 Yes 0 No

3 Too far to procure 1 Yes 0 No

4 Poor maintenance services 1 Yes 0 No

5 Other, SPECIFY: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***IF NO [TO QUESTION 103]*:**

1. Why don't you have LPG?

105.1. Is it not available or too far from your village to obtain? 1 Yes 0 No

105.2. Is it too expensive to install an LPG connection? 1 Yes 0 No

105.3. Is the monthly expense of LPG too expensive? 1 Yes 0 No

105.4. Don’t know how to get or whom to ask? 1 Yes 0 No

105.5 Other, SPECITY: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Are you interested in getting LPG? 1 Yes 0 No **(skip to 109)**
2. How much would you be willing to pay for LPG connection? \_\_\_\_\_\_ [RUPEES]
3. How much would you be willing to pay on monthly basis for enough LPG for your entire cooking needs? \_\_\_\_\_\_ [RUPEES/MONTH]
4. Do you use firewood and chips for cooking? 1 Yes 0 No **(Skip to 113)**

***IF YES*:**

109.1. Typically, how much firewood do you use per week for cooking? \_\_\_\_\_\_\_\_\_\_ [KG/WEEK]

**Of this:**

109.2. How much is collected by household members? \_\_\_\_\_\_\_\_\_ [KG]

109.3. How much is brought from the market? \_\_\_\_\_\_\_\_\_ [KG]

1. What is your collection frequency for firewood?

1 Daily 2 A few times a week 3 A few times a month 4 A few times a year 5 Not Applicable/Don’t collect firewood

**IF DAILY OR WEEKLY:**

1. How much time do you spend each time you go for collection?\_\_\_\_\_\_\_\_\_\_HOURS/collection
   1. What is the one-way distance in kilometers your household typically travels to:

111.1.1. Collect firewood and chips? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [KM]

111.1.2. Buy firewood and chips? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [KM]

1. How much does a KG of firewood and chips cost? \_\_\_\_\_\_\_\_ [RUPEES/KG] [If the respondent does not know the answer write “DK”]
2. Do you use dung cakes for cooking? 1 Yes 0 No **(Skip to 114)**

***IF YES*:**

113.1. Typically, how many dung cakes do you use per week? \_\_\_\_\_\_\_\_\_\_ [PIECES/ WEEK]

113.2. If you bought all of this in market, how much would it cost you? \_\_\_\_\_\_\_\_ [RUPEES/WEEK]

**Of this weekly usage:**

113.3. How many are prepared by household members? \_\_\_\_ [PIECES/ WEEK]

113.4. How many are bought from the market? \_\_\_\_ [PIECES/ WEEK]

1. Do you use agro residue for cooking? 1 Yes 0 No **(Skip to 115)**

***IF YES*:**

114.1. Typically, how much agro residue do you use per year? \_\_\_\_\_\_\_\_\_\_ [KG/YEAR]

114.2. How much does a KG of agro residue cost? \_\_\_\_\_\_\_\_ [RUPEES/KG]

**115.** Do you use any other fuel for cooking? 1 Yes, SPECIFY \_\_\_\_\_\_\_\_\_\_\_\_\_ 0 No

115.1 How much do you use of this fuel in a month? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [UNITS/WEEK]

115.2 How much do you spend on this fuel in a month? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ [RUPEES/ WEEK]

**FOR ALL HOUSEHOLDS**

1. Does your household have the following items and how many?

116.1. 3-stone cookstove? Indoor: \_\_\_\_ Outdoor: \_\_\_\_

116.2. Mud cookstove? Indoor: \_\_\_\_ Outdoor: \_\_\_\_

116.3. Improved biomass cookstove? Indoor: \_\_\_\_ Outdoor: \_\_\_\_ Portable: \_\_\_

116.4. Kerosene stove? Portable: \_\_\_\_

116.5. LPG gas stove? Portable: \_\_\_\_

116.6. Electric stove? Portable: \_\_\_\_

1. Where do you usually cook? 0 indoor 1 outdoor 2 mixed

# **4. Cooking Satisfaction**

1. What is your primary cooking fuel?

1 Firewood and chips 2 Dung cakes 3 LPG 4 Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Specify]

1. Generally, how satisfied are you with the availability of this primary cooking fuel to your household?

1 Unsatisfied 2 Neutral 3 Satisfied

**IF Unsatisfied:**

119.1. Are you cooking less than you want because of poor availability of cooking fuel?

1 Yes 0 No

1. Compared to 5 years ago, has the availability of this fuel:

1 Decreased 2 Remained the same 3 Increased

1. The primary arrangement of cooking that you use:

Produces excessive smoke? 1 Yes 0 No

Is too expensive to use? 1 Yes 0 No

Is too dangerous to use? 1 Yes 0 No

Is too time consuming? 1 Yes 0 No

Has good quality of cooking? 1 Yes 0 No

Is too difficult to use? 1 Yes 0 No

Others: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. So, overall how satisfied are you with your current primary cooking arrangement?

1 Unsatisfied 2 Neutral 3 Satisfied

1. Do you think there is an impact on your health from the cookstove that you use? 1 Yes 0 No
2. Considering the convenience of cooking, compared to traditional cookstove, the LPG-based cooking is:

1 Better 2 Similar 3 Worse 99 Don't know

1. Considering the impact on health, compared to traditional cookstove, the LPG-based cooking is:

1 Better 2 Similar 3 Worse 99 Don't know

1. Have you heard about improved biomass cookstoves? 1 Yes 0 No **(Skip to 129)**

***IF YES*:**

126.1 Compared to traditional cookstove, the improved biomass cookstove is:

1 Better 2 Similar 3 Worse 99 Don't know

1. Have you ever used an improved biomass cookstove in this household?

1 Yes 0 No **(IF NO, Skip to 129)**

***IF YES*:**

127.1. Do you still use it? 1 Yes 0 No

127.2 When did you first use it? \_\_\_\_\_\_ [YEARS AGO]

127.3. What was the cost of your improved biomass cookstove? \_\_\_\_\_\_ [RUPEES]

127.4. What is the type of clean cookstove?

0 Basic stove with chimney 1 Rocket type 2 Gasification-based

127.5. Who is the provider of the improved biomass cookstove?

0 Government 1 NGO 2 Private vendor

127.6. How satisfied are you with the performance of your improved biomass cookstove?

1 Unsatisfied 2 Neutral 3 Satisfied

***IF 1 (“UNSATISFIED”; OTHERWISE GO TO NEXT QUESTION):***

127.7. Too difficult to use? 1 Yes 0 No

127.8. Too dangerous to use? 1 Yes 0 No

127.9. Too costly? 1 Yes 0 No

127.10. Breakdown frequently? 1 Yes 0 No

127.11. Poor maintenance service? 1 Yes 0 No

127.12. Other. SPECIFY: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**128.** How much fuel does it save weekly compared to traditional chulha

\_\_\_\_\_\_\_\_\_ [KG/WEEK]? [*PUT NEGATIVE VALUES IF MORE FUEL CONSUMED THAN TRADITIONAL CHULHA*]

***IF NO*: *[\*\*\* ENUMERATOR: READ TO THE RESPONDENT \*\*\*]***

***Improved biomass cookstoves use biomass fuel for cooking. They burn biomass more efficiently than traditional stoves, reducing fuel use and smoke.***

1. Would you consider switching to improved biomass cookstove? 1 Yes 0 No

***IF YES:***

129.1. At what price would you be willing to buy one? \_\_\_ [RUPEES]

**Biogas Plants [FOR ALL HOUSEHOLDS]**

1. Have you heard about biogas with piped supply for cooking?

1 Yes 0 No **(IF NO, Skip to 134)**

***IF YES*:**

130.1. Compared to traditional cookstove, the biogas-based cooking is:

1 Better 2 Similar 3 Worse 99 Don't know

1. Have you ever used biogas for cooking in your household?

1 Yes 0 No **(IF NO, Skip to 134)**

***IF YES*:**

131.1. Do you still use it? 1 Yes 0 No

131.2. When did you first use it? \_\_\_\_\_\_ [YEARS AGO]

131.3. What kind of plant is/was it? 0 Individual 1 Community level

131.4. How satisfied are you with your biogas plant?

1 Unsatisfied 2 Neutral 3 Satisfied

***IF 1 (“UNSATISFIED”):***

131.5. Too difficult to use? 1 Yes 0 No

131.6. Too dangerous to use? 1 Yes 0 No

131.7. Too costly? 1 Yes 0 No

131.8. Breakdown frequently? 1 Yes 0 No

131.9. Poor maintenance service? 1 Yes 0 No

131.10. Other. SPECIFY: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Who is the provider of the biogas plant? 0 Government 1 NGO 2 Private vendor
2. What was the upfront cost of the biogas plant? \_\_\_\_\_\_\_\_\_\_\_ [RUPEES]

***IF NO*:**

***[\*\*\* ENUMERATOR READ TO THE RESPONDENT, SHOW IMAGE \*\*\*]***

***Biogas plants use organic products including dung, waste food to produce biogas. The gas is similar to LPG and is piped directly to your house. These plants also produce organic fertilizer which is used to improve the health of the soil in fields. However, biogas plants need daily attention in terms of maintenance, fuel feed and manure uptake.***

1. Would you consider switching to biogas cooking? 1 Yes 0 No

***IF YES:***

* 1. . At what price would you be willing to install one? \_\_\_\_\_\_\_\_\_ [RUPEES]

# **5. Policy Preference**

1. Which of the following should be in charge of the supply of electricity in your village?
2. Government
3. Private corporations
4. Non-governmental organizations
5. Other, specify \_\_\_\_\_\_\_\_\_\_
6. If you got reliable grid electricity, would you be willing to pay same rates as urban population in your state? 1 Yes 0 No
7. Please order the importance of government support to households on items from the following list. RANK THE SELECTION 1-5, WITH 1 MOST IMPORTANT AND 5 LEAST IMPORTANT.

LPG \_\_\_\_ [1-5]

Electricity \_\_\_\_ [1-5]

Kerosene \_\_\_\_ [1-5]

Clean water \_\_\_\_ [1-5]

Education \_\_\_\_ [1-5]

**LIGHTING**

1. Solar lanterns are portable devices that can be charged in the sun and provide light at night. Do you support government subsidies for solar lanterns, if they are funded by reducing subsidy for kerosene by the same amount?  
    1 Yes 0 No
2. Have you heard of the Rajiv Gandhi GrameenVidyutikaranYojana (RGGVY) program?

1 Yes 0 No **(Skip to 140)**

***IF YES*:**

139.1. Has your household been electrified under RGGVY? 1 Yes 0 No 99 Don't know

***IF NO*: Why not?**

139.2. No RGGVY in my village 1 Yes **(Skip to 140)** 0 No

139.3. Already had electricity 1 Yes **(Skip to 140)** 0 No

139.4. Connection was too expensive 1 Yes 0 No

139.5. Gram Panchayat did not recommend my household 1 Yes 0 No

139.6. Other. SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**KEROSENE QUESTIONS(FOR ALL HOUSEHOLDS)**

1. What is your monthly quota for PDS kerosene? \_\_\_\_\_\_\_ [LITERS/MONTH] **[\*\*IF RESPONDENT DOESN’T KNOW MARK “DK” and skip to 142\*\*]**
2. In last one year, how frequently it happened that you wanted to buy and you were able to get your entire PDS quota of kerosene?

0. 0-3 months 1. 4-6 months 2. 7-9 months 3. 10-12 months

1. Do people in your village resell subsidized kerosene? 1 Yes 0 No
2. Do you think this practice should be stopped? 1 Yes 0 No
3. Should government condition kerosene subsidy on income? 1 Yes 0 No
4. Should government condition kerosene subsidy on household size? 1 Yes 0 No
5. Should government condition kerosene subsidy on government caste? 1 Yes 0 No
6. Should government condition kerosene subsidy on urban/rural area? 1 Yes 0 No
7. Which of the following should determine the amount of subsidy?
8. Gram panchayat
9. State government
10. Central government
11. What is the level of corruption in the supply of PDS kerosene?

0 Corrupt 1 Neutral 2 Clean 99 Don't know

1. If the government could only subsidize one type of lighting, which one should it be? [CHECK ONE]

0 Kerosene

1. Solar lantern/ Solar home systems
2. Micro-grid
3. Lighting through the regular electric grid
4. Other, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**LPG QUESTIONS** **(FOR ALL HOUSEHOLDS)**

1. . Which of the following should be in charge of the supply of LPG in your village?

1 Government

1. Private corporations

3. Non-governmental organizations

4. Other, specify \_\_\_\_\_\_\_\_\_\_

1. Do people in your village resell subsidized LPG? 1 Yes 0 No 99 Don’t Know 999 NA
2. Do you think that this practice should be stopped? 1 Yes 0 No 99 Don’t Know 999 NA
3. Do you think that this practice is legal? 1 Yes 0 No 99 Don’t Know 999 NA
4. Please rank the following on the basis of what government should priorities [1 IS HIGHEST PRIORITY, 4 LOWEST PRIORITY]:

155.1. Provision of improved biomass cook-stoves \_\_\_\_ [1-4]

155.2. Increased LPG subsidy \_\_\_\_ [1-4]

155.3. Provision of improved biogas plants \_\_\_\_ [1-4]

115.4 Improved availability of LPG cylinders \_\_\_\_ [1-4]