India Residential Energy Survey (IRES) 2020

Questionnaire

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Technical Document | October 2020

Contents

Instructions for the interviewers:
- All questions are compulsory unless otherwise stated.
- Please follow the instructions for each question, where relevant. These are shown in a specific colour; not to be read aloud to the respondents, unless specified.
- Unless specified, list of options not to be read aloud; only one option to be marked.
- Codes: MC – multiple choice, SC – Single choice

INTRODUCTION / परिचय
[Show ID card to the household member and request to meet the head of the family. If the household head is not available, ask for an adult member who has full knowledge about the household situation and its key decisions.]
Good _____! My name is _____. I work with Market-Xcel, an organization that conducts surveys in India. Your household has been selected to participate in a short survey. The survey is led by the Council on Energy, Environment and Water (CEEW) in association with Johns Hopkins University.
The objective of this all-India survey is to understand the state of electricity supply and the way people use electricity in their houses. This information could potentially help the electricity companies to plan better for their electricity services and could assist in better policies around electricity provision in India. The survey also aims to understand the state of access to cooking energy. Any personal/identification details will be kept strictly confidential and only anonymized aggregated information will be used for research purposes only.
I would be highly obliged if you can spare some time. This would take around 30 – 45 minutes. Thank you.

Section 1 - Household consent

Q101. Would you like to participate in the survey?	1 Yes	0 No

If no to Q101, (Go to Q102)

Q102. Record the reason from the following and abort the survey:

No adult member is present	1
Adult member aware of the household decisions it not present	2
Refused, do not have time to give interview	3
Do not want to share personal data	4
Door locked	5
Other, please specify _____	6

Section 2 - Household roster

SECTION 2a – Demographics

Q103. Survey type

Rural	1
Urban	2

Q201. Respondent's Gender [Observe and note]

Male	0
Female	1

Q202. What is your age?

Years

Read aloud: I will start by asking some questions about your household. The following questions are about the primary income earner - the person who makes maximum contribution to income in your house.

Q203. Who is the primary income earner in your household - the person who earns the most in your family? Is it your…

Self	1
Husband/Wife	2
Mother/father	3
Son/Daughter	4
Brother/Sister	5
Others, please specify _____	6

Q204. Gender of the primary income earner
[Do not ask; Record on the basis of the previous response]

Female	1
Male	0

Q205. Can you please tell me the age of the primary income earner?

Age

Q206. Are you/this person (primary income earner) also the head of the household?

	Code
Yes	1
No	0

Q208. What is the highest level of education of the primary income earner of your household? [Single choice - SC]

	Code
Illiterate	1
Literate but no formal schooling	2
School up to class 4th	3
School - 5th to 8th class	4
School - 9th to 10th class	5
School - 11th to 12th class	6
Some college (including diploma but not graduate)	7
Graduate or post graduate	8

Q209. What is the highest level of education received by any member in your household? [SC]

	Code
Illiterate	1
Literate but no formal schooling	2
School upto class 4th	3
School - 5th to 8th class	4
School - 9th to 10th class	5
School - 11th to 12th class	6
Some college (including diploma but not graduate)	7
Graduate or post graduate	8

Options in Q209 should start from the option selected in Q208.

Q210. What religion do your family members follow? [SC]

	Code
Hinduism	1
Islam	2
Christianity	3
Sikhism	4
Buddhism	5
Jainism	6
None	7
Others, please specify	8

Q211 What is the government caste category for your household? [SC]

Government caste category	Code
Scheduled Caste (SC)	1
Scheduled Tribe (ST)	2
Other backward class (OBC)	3
General	4
None/ Don't want to reveal	5
Don't know	99

Q212. Do you have BPL or Antyodaya ration card? [SC]

	Code
Antyodaya	1
BPL	2
None	3
Don't know	99

Q213. How many people live in this household permanently (as of now)?
(Include all members of the household who permanently reside in the house and eat their meals from one chulha (stove) in the house)

Q214. Please mention the number of people staying in this house according to their age-groups?

Age group	Number
1. Less than 18 years	
2. 18 to 40 years	
3. 41 to 60 years	
4. More than 61 years	

(Total should add up to number specified in Q213)

Q215. How many people are currently studying?

(Should be less than number specified in Q213)

SECTION 2b – House characteristics

Q216. Is the house pucca or kachha? [Observe and code]

	Code
Kachha	1
Mixed (Semi – Pucca)	2
Pucca	3

If Coded 1 in Q216 skip to Q220

Q217. Type of the house. [Observe and code]

	Code
Independent house/bungalow	1
Multi-storey apartment building (multi-family units)	2

Q218. How many storeys/levels are there in the building? [Observe and code; ask only if needed]

If Coded 1 in Q218 then skip to Q220

Q219. Floor at which the family is residing? (Multiple choice - MC) [Observe and code; Select all that apply]

	Code
Ground floor	1
Middle floor	2
Top floor	3
All the floors	4

Read aloud: Now I am going to ask some questions about your house. Please do not include area used by tenants.

Q220. Does your family own this house?

	Code
Yes	1
No	0

Q222. For how many years have you/your family been living in this house?
[Less than 6 months to be coded as 0. Round off to the nearest integer; If the response is ever since, ask – have you been living for more than 100 years? If yes, mark 100]

Q223. How many bedrooms do you have in your house?
 [Please do not include the area in use by the tenants]

Q224. How many toilets/bathrooms do you have in your house?
 [Please do not include the area in use by the tenants]

Q225. Now think about other rooms in your home besides bedrooms, toilets and bathrooms. How many other rooms do you have in your house?
[For interviewer: Covered spaces used for kitchen, dining, living room, storage, etc. to be counted here. Area used by the tenants to be excluded]

Q226. Do any large trees shade your home from the afternoon summer sun?

	Code
Yes	1
No	0

Q227. In order to understand the usage of energy in your home, we need to know about its size.

Q227.a Can you please tell us how big is your plot area? Your best estimate will do.

_____	**Units (Drop down)**
	<1> Square feet
	<2> Gaz (sq. yard)
	<3> Acre / killa
	<4> Bigha (kachha)
	<5> Bigha (pucca)
	<6> Biswa (kaccha)
	<7> Biswa (pucca)
	<8> Cent / Decimal
	<9> Dhur
	<10> Gunta
	<11> Kattha
	<12> Kuncham
	<13> Marla
	<14> Nali
	<15> Square meter
	<16> Others - Please specify _____
	<99> Don't know

If coded 99 in Q227a then ask Q227b

Q227.b. Record the estimated plot area by observing length and breadth of the plot.

_____	**Units (Drop down)**
	<1> Square feet
	<2> Gaz (sq. yard)
	<3> Acre / killa
	<4> Bigha (kachha)
	<5> Bigha (pucca)
	<6> Biswa (kaccha)
	<7> Biswa (pucca)
	<8> Cent / Decimal
	<9> Dhur
	<10> Gunta
	<11> Kattha
	<12> Kuncham
	<13> Marla
	<14> Nali
	<15> Square meter
	<16> Others - Please specify _____
	<99> Difficult to estimate

Q228. Of your total plot area, what percentage is in use for house, i.e. is built-up/covered area? Your best estimate will do.

[Interviewer Note: If the respondent doesn't know, estimate by observing. If difficult to estimate, code 99]

Percentage (%)

SECTION 2c - Economic status

Read aloud: I would now ask few questions about the economic situation of your house

Q229. Do you own a bicycle?

	Code
Yes	1
No	0

Q230. How many motorized 2-wheeler (examples: motor bike, scooter) do you own?

Q231. How many motorized 3/4-wheeler (examples: auto, car, tractor, truck) do you own?

Q232. How many mobile phones does your household use?

Ask Q232.1 if more than 0 in Q232

Q232. 1. How many of these are smart phones?

[Q232.1 should be less than or equal to number in Q232]

Q233a. Which sources of water do you use to meet your household needs? (MC)
Q233b. What is the main source of water for your drinking needs? (SC)

	Q233.a	Q233b.
Piped water supply	1	1
Tube well or borehole	2	2
Hand pump at home	3	3
Public or neighbour's hand pump	4	4
Public tap/standpipe	5	5
Tanker truck	6	6

Water well	7	7
Tank/pond/lake	8	8
River/canal	9	9
Canned water (water bottle/ camper etc)	10	10

Q234. Considering all expenditure heads, how much is the average monthly expenditure of your household (in rupees)? [Code 99 if don't know]

Q235. What is the primary source of income for your family? (SC)

	Code
Agriculture	1
Agricultural labour	2
Non-agricultural labour	3
Cattle rearing	4
Government job	5
Private job	6
Self-employed/Freelance work	7
Petty business/ shop	8
Business/ trade	9
Pension	10
Remittances	11
Rental Income	12
Others, please specify	13

Q236. Please see this **card.** Considering the income from all sources that you just mentioned, under which monthly income category does your household fall?

	Code
Up to Rs. 5000	1
Rs. 5,001 - Rs. 10,000	2
Rs. 10,001 to 20,000	3
Rs. 20,000 – Rs. 30,000	4
Rs, 30,001 to 40,000	5
Rs. 40,001 – Rs. 50,000	6
Rs. 50,001 to 75,000	7
Rs. 75,001 – Rs. 1,00,000	8
Rs. 1,00,000 – Rs. 1,50,000	9
More than 1,50,000	10
Do not want to reveal/NA	88

SECTION 3 - State of electricity access

Read aloud: I will now ask about the quality of electricity supply in your household

Section 3a - Grid-electricity services

Q301 Do you have government (or grid) electricity supply in your house?

	Code
Yes	1
No	0
Have connection, but no electricity yet	2

Ask 301.a if coded 1 in Q301 and 1 in Q103

Q301.a Is this supply from an (agricultural) electricity connection?

	Code
Yes	1
No	0

Ask Q301.1 if coded 0 in Q301

Q301.1 Why don't you have government (or grid) electricity? (MC)

	Code
Cannot afford the connection (or do not earn enough)	1
Not available in my neighbourhood	2
Poor quality supply or too many power cuts	3
Already have some other sources	4
Connection got cut by electricity department	5
Have applied for the connection	6
Connection was refused	7
Landlord has not taken connection	8
Others, please specify	9

Ask Q302 - 316 if coded 1 in Q301, else skip to Q317

Q302. How many hours a day is electricity usually available?

[If coded 24 in Q302, skip to Q304]

Q303. How many hours is electricity usually available between sunset and midnight (6 pm till 12 o' clock midnight)?

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Q304. What was the pattern/rate of power-cuts in the past one month*?* (SC)

	Code
Few times a day	1
Once a day	2
Few times a week	3
Few times a month	4
No power cut	5
Don't know / Can't say	99

If coded 5 in Q304 then skip to Q308

Q305. Do you generally know beforehand when would a power-cut happen?

	Code
Yes	1
No	0

Ask Q306 if coded 1 in Q103 (asked only to rural households)
Q306. How many days in the last month has there been a power cut of more than 20 hours continuously? [Code 99 for Don't know]

Ask Q307 if coded 2 in Q103 (asked only to urban households)
Q307. How many days in the last month has there been a power cut of more than 12 hours continuously? [Code 99 for Don't know]

Ask to both urban and rural HH (coded 1or 2 in Q103)
Q308. How many days in the last month did you experience that voltage was too low to run appliances properly? [Code 99 for Don't know]

Q309. How many days in the last month did you experience voltage fluctuation which led to electric equipment failure or the need for repair? [Code 99 for Don't know]

Q310. Do you have voltage stabilizers in your house? [Include stablisers used at the mains supply or with AC/Fridge]

	Code
Yes	1
No	0

Q310.1 How many stabilizers do you have in your home?

Read aloud: Now I will ask about your experience related to metering and billing

Q311. Since how many years has your household been using grid electricity?
[Code 0, if the connection is less than 6 months old; Round off to nearest integer]

Number of years	Years	Don't know (99)

312. Do you have an electricity meter?

	Code
Yes	1
No	0
Yes, but not working	2

Q313. How frequently do you receive electricity bill?

	Code
Once every Month	1
Once every two months	2
Once every three months	3
Once a year	4
Irregular	5
Haven't received so far	6
Pay to landlord/society management as a part of rent/maintenance charges	7
Katiya connection	8
Others , please specify _____	9

Q314. How do you pay your electricity bills? (MC)

	Code
Online payment (Paytm, BHIM, google pay, etc.)	1
Private shops/kiosk	2
Customer care centre/ electricity department office	3
Collection agent (who comes at home)	4
Nearby bank	5
Post office	6
Panchayat or municipality office	7
Pay to landlord/society management as a part of rent/maintenance charges	8
Neighbour/relative	9
No spending for electricity	10
Others, please specify	11

Q314.a Has any member in your house ever made any online payment?

	Code
Yes	1
No	0

Q314.b Would you find it easier or more difficult to pay your electricity bills online, compared to the way you pay them currently?

	Code
Easier	1
Difficult	2
Don't Know	99

Q315. What is your average monthly spending on (government/grid) electricity during the following months? [Exclude electricity bill for the tenants, where applicable and known]

a.	March – June	Rs. _____	Don't Know (99)
b.	July – October	Rs_____	Don't Know (99)
c	November – February	Rs_____	Don't Know (99)

Section 3b - Alternative electricity and lighting sources

Q316. Do you have an **inverter-battery system** (rechargeable battery) in your house?

	Code
Yes	1
No	0

Q316.a How many rupees did the inverter-battery system (rechargeable battery) cost you?

Cost in Rupees	Rs. _____	Don't Know (99)

Q316.b How many years ago did you buy your first battery?
[Less than 6 months to be coded as 0. Round off to the nearest integer]

Number of years	Years	Don't Know (99)

Q316.c How many years did your previous battery last for?

Number of years	Years	If this is the first battery, code 88; code 99 if don't know

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Q316.d How many rupees does it cost you per month for charging?

Cost in Rupees	_____	Don't Know (99)

Q317. Does your household use electricity from a **diesel generator**?

	Code
Yes	1
No	0

Q317.a Do you use a personal generator or do you receive electricity from a generator operator or society management?

	Code
Personal	1
Operator	2
Society	3

Q317.b How much do you spend on diesel back-up for electricity per month?

Cost in Rupees	Rs. _____	Don't Know (99)

Q317.c How many rupees did the diesel generator cost you?

Cost in Rupees	Rs. _____	Don't Know (99)

Q318. Please see this **picture.** Have you heard about **solar home system**?
Interviewer to show picture and read aloud if the respondent doesn't understand: Sunlight can be used to produce electricity. Solar panels are installed on rooftops and the energy from sunlight is transformed into electricity. The system life is 15-20 years. If the system has batteries, then those need to be replaced after every 3-5 years.]

	Code
Yes	1
No	0

Q319. Do you use solar home system for electricity in your house?

	Code
Yes	1
No	0

Q319.a How much did the solar home system cost you?

Cost in Rupees	Rs. _____	Don't Know (99)

Q319.b What is the capacity of your system or solar plate?

Capacity in Watts	Watts	Don't Know (99)

Q319.c How many years have you been using solar home system for electricity in your house for? *[Less than 6 months to be coded as 0. Round off to the nearest integer]*

Number of years	Years	Don't Know (99)

Q319.d Have you ever considered installing a solar home system in your house?

	Code
Yes	1
No	0

Q319.e Why do you not have a solar home system? Please state the main reasons. (MC)

	Code
Don't need it in near future	1
It is expensive (high capital cost)	2
Have doubts about electricity savings from it	3
Have doubts about system quality	4
Do not know how will it benefit me	5
Do not know any locally available company for this	6
Do not know about the process to install it	7
Do not know how to get subsidy for it	8
Do not know how to get a loan for it	9
Did not get good feedback from current users	10
Do not have space for it	11
Others, please specify: _____	12

Q320. See these **pictures.** Does your household use any of the following sources of lighting?

		Yes	No
Q320a.	Solar Lanterns	1	0
Q320b.	Emergency Lights	1	0
Q320c.	Solar Mini Grid connection	1	0
Q320d.	Kerosene lamp/Lanterns	1	0

Ask Q321 if coded 1 in Q320.b and (0 or 2) in Q301 [i.e. household without grid-electricity supply]

Q321. How much do you spend on charging your emergency light per month?

Cost in Rupees	Rs. _____	Don't Know (99)

Ask Q322 if CODED 1 in Q320.c

Q322. What is your monthly expenditure on using mini-grid electricity? [Code 99 if don't know]

Cost in Rupees	Rs. _____	Don't Know (99)

Ask Q323 if coded 1 in Q320.d

Q323. How much do you spend on kerosene per month that is used for lighting? [Code 99 if don't know]

Cost in Rupees	Rs. _____	Don't Know (99)

[If the household is not electrified, i.e. has 0 in (Q301 and Q316 and Q317 and Q319 and Q320c), then go to section 5]

Section 3c - Satisfaction with the electricity and lighting services

Q324. Overall, what is the primary source of electricity for your household?

	Code
Grid electricity	1
Rechargeable battery	2
Solar home system	3
Solar mini-grid	4
Personal Diesel generator (personal)	5
Society/ Operator Diesel generator	6

Q326. Overall, how satisfied are you with the electricity situation in your home?

Very Unsatisfied	Somewhat Unsatisfied	Neutral	Somewhat Satisfied	Very Satisfied
1	**2**	**3**	**4**	**5**

Skip Q328, Q328.1, Q329 and Q329.1 if coded 0/2 in Q301 (i.e., for those households that are not using grid electricity)

Q328. Did any one in your family register any complaints related to electricity faults or maintenance in the past 6 months?

Yes	1
No	0
Don't Know	99

Ask Q328.1 If coded 1 in Q328

Q328.1 On an average, how much time did it take for your complaint to get resolved?

	Code
Less than 3 hours	1
3-6 hours	2
6-12 hours	3
12-24 hours	4
1 day – 7 days	5
More than 7 days	6

Q329. Is any member of your family aware of the electricity helpline number (toll-free customer care number)?

Yes	1
No	0

Ask Q329.1 if coded 1 in Q329

Q329.1 Has anyone in your family ever used it to register any electricity related complaints?

Yes	1
No	0

Section – 4: Electricity appliances and usage pattern

Read aloud: Now I will ask questions related to electric appliances used in your house.

Interviewer to show the BEE star label to the respondent.

Q401. Please see this **picture.** Have you heard or seen about the BEE star labels on electric appliances?

	Code
Yes	1
No	0

AskQ403 and Q404 if coded 1 in Q401. Else skip to Q405

Q403. According to you, what are the benefits of using star labelled appliances? (MC)

	Code
Energy savings/lower electricity bill	1
Good quality product	2
Longer product life	3
Environment friendly	4
Others, please specify: _____	5
None	6
Don't know	99

Section 4a – Lighting

Now I will ask questions related to lighting in your house.

Q405. Please see these **pictures.** How many of the following lighting fixtures do you have?

A	Incandescent bulbs	
B	CFL bulbs	
C	LED bulbs	
D	LED Tube-lights	
E	Tube-lights (CFL)	

Ask Q406 if answer to Q405.c and Q405.d is 0

Q406. Why have you not installed LED bulbs or tubelights in your house?

	Code
Not aware of LED bulbs	1
These are costlier than other bulbs	2
They are not available in nearby shops	3
Waiting for present bulbs to stop working	4
Installed LED bulb(s) earlier but they got damaged very soon	5

Others, please specify: _____	6

Q407. Why did you purchase LED bulbs and/or tube-lights? (MC)

	Code
Work better in poor electricity supply	1
Better light quality than other lighting options	2
Longer life	3
Available for low cost/free under government programme	4
To save electricity/reduce electricity bill	5
Others, please specify	6
Can't Say / Don't know	99

Q408. Are you satisfied with the LED lighting in your house?

	Code
Yes	1
No	0

Q408.1 Why are you not satisfied with LED lighting in your house? (MC)

	Code
Causes strain to the eye	1
Light is insufficient	2
Stopped working sooner than expected	3
Has dimmed over time	4
Is costly to replace	5
Can't Say / Don't know	99

Section 4b –Space Cooling/Heating

Q409. Do you have **ceiling fans** in your house?

	Code
Yes	1
No	0

Q410. How many ceiling fans do you have in your house?

Q411. How many months in a year do you use ceiling fans?

[Round off to the nearest integer. Less than 1 month should be put as 1. If not used at all, then put 0]

| |
| |

Q412. On an average, what is the total hours of ceiling fan use per day in your house?
[Note down hours for all fans in Q410. Code 0 if any fan is used for less than 30 mintues/day]

Fan 1	
Fan 2	
Fan 3	
Fan 4	
Fan 5	
Fan 6	
Fan 7	
Fan 8	
Fan 9	
Fan 10	

Q413. How old is your most used ceiling fan?
[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1. Code 99 if don't know]

| **Years** |
| |

Q414. The ceiling fan that you use the most, is it from a local company or a reputed brand?

	Code
Local Company	1
Reputed Brand	2
Don't Know	99

Q414a. See this **picture**. Have you heard about energy-efficient (BEE star rated) fans?

	Code
Yes	1
No	0

Q414.b How many of your ceiling fans are star rated?

| |
| |

Q415. Do you have **table/pedestal/wall mounted** in your house?

	Code
Yes	1
No	0

Q416. How many such table/pedestal/wall mounted fans do you have in your house?

Q417. How many months in a year do you use table/pedestal/wall mounted fans?
[Round off to the nearest integer. Less than 1 month should be put as 1. If not used at all, then put 0]

Q418. On an average, what is the total hours of table/pedestal/wall mounted fan use per day in your house?
[Note down hours for all fans in Q416; code 0 if fan use is less than 30 mintues/day]

Table Fan 1	
Table Fan 2	
Table Fan 3	
Table Fan 4	
Table Fan 5	
Table Fan 6	
Table Fan 7	
Table Fan 8	
Table Fan 9	
Table Fan 10	

Q419. How old is your most used table/pedestal/wall mounted fan (in years)?

[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1. Code 99 if don't know]

Years

Q420. The table/pedestal/wall mounted fan that you use the most, is it from a local company or a reputed brand?

	Code
Local Company	1
Reputed Brand	2
Don't Know	99

Q421. Do you have **air coolers** in your house?

	Code
Yes	1
No	0

Ask Q422 – Q426 if coded 1 Q421

Q422. How many air coolers do you have in your house?

Q423. How many months in a year do you use air coolers?

[Round off to the nearest integer. Less than 1 month should be put as 1. If not used at all, then code 0.]

Q424. On an average, what is the total hours of air cooler use per day in your house?

[Note down hours for all air coolers in use as specified in Q422; code 0 if use is less than 30 mintues/day]

Air cooler 1	
Air cooler 2	
Air cooler 3	
Air cooler 4	
Air cooler 5	
Air cooler 6	
Air cooler 7	
Air cooler 8	
Air cooler 9	
Air cooler 10	

Q425. How old is your most regularly used air cooler?

[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1. Code 99 if don't know]

Years

Q426. The air cooler that you use the most, is it from a local company or a reputed brand?

	Code
Local Company	1
Reputed Brand	2
Don't Know	99

Ask Q427 – Q444 if coded 2/3 in Q216 (Pucca, Mixed house) else skip to Q445.

Q427. Do you use any **air-conditioner**?

	Code
Yes	1
No	0

Ask Q428 – 443 if coded 1 in Q427, else skip to Q444

Q428. How many air-conditioners do you have?

Numbers –

Q429. When did you buy your first AC?

[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1. Code 99 if don't know]

Years –

[Read aloud: I would like to ask few questions about your most used air-conditioner.]

Q430. What is the type of this air conditioner - window or split?

	Code
Window	1
Split	2

Q431. What is the capacity of this air conditioner (in tons). [Code 99 if Don't know]

Tons

[Allow decimal entry]

Q432. How old is this air conditioner?

[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1. Code 99 if don't know]

Years –

Q433. Is this AC a new buy or second-hand?

	Code
New Buy	1
Second Hand	2
Rented	3
Gifted	4
Don't know/ Can't say	99

Q434. What is the BEE star rating of this air conditioner? *(Interviewer to show image of star rating) [Request the respondent to physically check and confirm]*

	Code
Not Rated	0
1 star	1
2 star	2
3 star	3
4 star	4
5 star	5
Don't know/ Can't say	99

Ask Q434.1 if coded 0/1/2/3 in Q434

Q434.1 Why did you not chose a higher star labelled AC? (MC) [Don't read options]

Didn't think much about it	1
Chose according to vendor's suggestions	2
Was too expensive	3
Was not available at the shop	4
Unsure of the benefits from higher rating	5
My use of AC is too low to justify addition cost	6
Other: _____	7

Q435. How many days during the following months do you use this AC?

March - June		Fix between 0-120 days
July – October		Fix between 0-120 days
November – February		Fix between 0-120 days

Q436. How many hours a day do you use this AC during the following months? [Code 0.5 if used for less than or equal to half an hour]

March – June		Fix between 0-24 hours
July – October		Fix between 0-24 hours
November – February		Fix between 0 -24 hours

[Allow decimal entry]

Q436.1 Please see this picture. During which of the following time-slots do you use your AC during summer months? (MC)

	Code
5 am -8 am	1
8 am -11 am	2
11 am -2 pm	3
2 pm -5 pm	4
5 pm -8 pm	5
8 pm -11 pm	6
11 pm -2 am	7
2 am -5 am	8

Q437. What is the average temperature setting for this air-conditioner in your home?

[If the facility doesn't allow temperature setting then code 88; if the respondent doesn't know or doesn't set temperature, code 99]

Temperature in Celsius

(Fix between 16-31)

Q438. How often do you use ceiling fan while using air-conditioner in the room?

	Code
Never	0
Sometimes	1
Always	2

If coded 1 in Q428 i.e., if the household has only 1 AC; skip to Q443

Now I would like to ask few questions about your second most used air-conditioner

Q439. What is its capacity (in tons) of your second most used AC? [Code 99 if Don't know]

Tons

[Allow decimal entry]

Q440. How many days during the following months do you use your second most used AC?

March – June		Fix between 0-120 days
July – October		Fix between 0-120 days
November – February		Fix between 0-120 days

Q441. How many hours a day do you use your second most used AC during the following months? [Code 0.5 if used for less than or equal to half an hour]

March - June		Fix between 0-24 hours
July – October		Fix between 0-24 hours
November – February		Fix between 0-24 hours

[Allow decimal entry]

Q442. What is the BEE star rating of the second most used air conditioner? (Interviewer to show image of star rating)

	Code
Not Rated	0
1 star	1
2 star	2
3 star	3
4 star	4
5 star	5
Don't know/ Can't say	99

If coded 1 or 2 in Q428 i.e. If the household has 2 or less ACs; skip to Q443

Q442.1. Please tell me few details about the other ACs in your house:
[Note down for all AC in Q416)

	Capacity [0.5-5 ton]	Hours of use [0-24 hours/day] [Allow decimal entry]	Months of use (0-12) [Allow decimal entry]	BEE star rating [0-5, 99] [drop down as per q442]
AC 3				
Ac 4				
AC 5				
AC 6				
AC 7				
AC 8				

Q443. How frequently do you get your air-conditioner serviced by the technician?

	Code
Do not get it serviced by the technician	1
Service/clean it ourselves	2
When it stops working	3
Once in three years	4
Once in two years	5
Once in a year	6
Twice a year	7
Thrice a year	8
Others, please specify _____	9
Don't know/ Can't say	99

Q444. Do you plan to buy an air-conditioner in next two years?

	Code
Yes	1
No	0
Don't Know/ Can't say	99

Q445. Do you use any **equipment to warm your house** in winters, such as heater, etc.?

	Code
Yes	1
No	0

Q446. Please see these **pictures**. Please tell me the type of heating equipment that you use? (MC) [Read aloud all options and mark all that apply]

	Code
Electric heater - with a fan	1
Electric heater - with halogen	2
Electric heater - oil-filled	3
Gas heater	4
Heating stove or fireplace	5
Cooking stove /Chulha	6
Others, please specify_____	7

Q447. How many **electric room heaters** do you have in your home?

Q448. How many months in a year do you use electric room heater?

 [Round off to the nearest integer. Less than 1 month should be put as 1. If not used at all, then put 0]

Q449. On average, how many hours per day do you use these heaters?

[Write hours for all heaters specified in Q447]

Heater 1	
Heater 2	
Heater 3	
Heater 4	
Heater 5	
Heater 6	
Heater 7	
Heater 8	
Heater 9	
Heater 10	

Section 4c– Water heating

Q450. Does your household use hot water for bathing?

	Code
Yes	1
No	0

Q451. Please see these **pictures** and tell me. Which of the following appliance is generally used for heating water in your house? [Read aloud all options and mark all that apply]

	Code
Electric Geyser	1
Immersion rod	2
LPG gas based water-heater	3
LPG/PNG stove	4
Chulha (Firewood/dung cake stove)	5
Kerosene stove	6
Electric coil stove	7
Solar water heater	8

Q452. How many months in a year your family uses hot water for bathing?

[Round off to the nearest integer. Less than 1 month should be put as 1.]

Q453. How many electric geysers do you have?

Q454. How old is your most used electric geyser?

[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1; Code 99 if don't know]

Years –

Q455. What is the storage capacity (in litres) of your geyser? [Code 99 if Don't know]

Capacity in litres

Q456. What is the BEE star rating of your most used electric geyser?

	Code
Not Rated	0
1 star	1
2 star	2
3 star	3
4 star	4
5 star	5
Don't know/ Can't say	99

Q457. During the months of use, for how many hours per day is the geyser(s) used?
[Note down hours for all geysers in Q453]

	Hours (0-6)	Minutes (0-59)
Geyser 1		
Geyser 2		
Geyser 3		
Geyser 4		
Geyser 5		
Geyser 6		
Geyser 7		
Geyser 8		
Geyser 9		
Geyser 10		

Ask Q458 if coded 2 in Q451, else skip to Q459

Q458. How many immersion rods do you use in your house?

Q458a. During the months of use, for how many hours per day is the immersion rod(s) used?
[Note down hours for all immersion rods in use, as specified in Q458]

Immersion rod 1	
Immersion rod 2	
Immersion rod 3	
Immersion rod 4	
Immersion rod 5	
Immersion rod 6	
Immersion rod 7	
Immersion rod 8	
Immersion rod 9	
Immersion rod 10	

Section 4d– Entertainment
Q459. Do you have **television (TV)** in your house?

	Code
Yes	1
No	0

If coded 0 in Q459 skip to Q465

Q460. How many TV sets do you have?

| |
| |

[Please read aloud: I would like to ask few questions about your most used TV.]

Q461. See these **pictures** and tell me. What is the type of your most used TV?

	Code
CRT – black and white	1
CRT – color	2
LED/LCD	3
Plasma	4
Don't know/ Can't say	99

Q462. How old is your most used TV?

[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1; Code 99 if don't know]

| **Years –** |
| |

Q463. What is its screen size (in inches)? [Code 99 for Don't know]

| |
| |

Q464. For how many hours is this TV turned on each day? Include the time it is on even if no one is watching.

| |
| |

Q465. How many of the following devices do you have in your home?

	Code	Number
Desktop computer	1	
Laptop/Tablet Computers	2	
Modem/router (for Internet or WiFi)	3	
Audio or music system	4	

Section 4e - Kitchen and household appliances
Now I want to ask about the electric appliances that you may be using in your kitchen

Q466. Do you a have **refrigerator** in your house?

	Code
Yes	1
No	0

If coded 0 in Q466 skip to Q471

Q467. How many refrigerators do you have?

Q468. How old is your most used refrigerator?

[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1; Code 99 if don't know]

Years -

Q469. What is the BEE star rating of this most used refrigerator?

(Interviewer to show image of star rating)

	Code
Not Rated	0
1 star	1
2 star	2
3 star	3
4 star	4
5 star	5
Don't know/ Can't say	99

Q470. When do you switch off your refrigerator?

	Code
Never	1
When going on a vacation	2
For a few hours everyday (e.g. during night)	3
For a few hours in the day in some seasons	4
During entire winter months	5
Others, please specify: _____	

Q471. Do you use any of the following **kitchen appliances** in your house at least once a month? (Read all aloud)

	Yes	No
Electric Water purifier	1	0
Blender/juicer/mixer/grinder	1	0
Electric Kettle	1	0
Electric atta chakki/rice huller	1	0

Q472. Do you use **washing machine** in your house?

	Code
Yes	1
No	0

If coded 0 in Q472, skip to Q476

Q473. How many times a week do you use the washing machine?

Q474. How old is the washing machine?

[Less than 6 months should be put as 0. Between 6 months and a year should be put as 1; Code 99 if don't know]

Years

Q475. What is the BEE star rating of the washing machine? *(Interviewer to show image of star rating)*

	Code
Not Rated	0
1 star	1
2 star	2
3 star	3
4 star	4
5 star	5
Don't know/ Can't say	99

Q476. Do you use **electric iron** in your house?

	Code
Yes	1
No	0

Q477. Do you have an electric **water pump** in your house?

	Code
Yes	1
No	0

If coded 0 in Q477 skip to Q501

Q478. How old is the water pump? [Less than 6 months should be put as 0. Between 6 months and a year should be put as 1; Code 99 if don't know]

Q479. What is the BEE star rating of the water pump?

	Code
Not Rated	0
1 star	1
2 star	2
3 star	3
4 star	4
5 star	5
Don't know/ Can't say	99

Q479.1 Is it a submersible pump (for ground water pumping)?

	Code
Yes	1
No	0

Q480. What is its capacity in HP (horse-power) of the water pump? [Code 99 for Don't know]

Q481. How many hours a day is this pump used for your domestic water needs? [If the pump is shared by multiple families, record hours of use for the concerned family only]

Hours : _____   Minutes: _____

Section 5 - Cooking energy access and use

I will now ask you questions related to energy use for cooking in your house.

Section 5a - PNG and LPG use for cooking

Q501. Do you use **PNG or piped gas** for cooking in your house?

	Code
	Code
Yes	1
No	0

Q501.1 What is your typical monthly bill on PNG gas use? [Code 99 if don't know]

Rs.

Q502. Do you use **LPG gas** for cooking in house?

	Code
	Code
Yes	1
No	0

Q502.1 Why don't you have LPG?

	Yes	No
Is it not available or too far from your place to obtain?	1	0
Is it too expensive to install an LPG connection?	1	0
Is the monthly expense of LPG too expensive?	1	0
Is it because free biomass is easily available?	1	0
Is it because you don't like LPG cooked food?	1	0
Tried to get it, but declined because you didn't have required documentation	1	0
Don't know how to get or whom to ask?	1	0
Others, please specify: _____	1	0

Q503. How many years ago did your house begin to use LPG?   [Code 99 if don't know]
[Less than 1 year to be coded as 0. Round off to the nearest integer]

YEARS

Q504. How much did it cost to get the LPG connection? [Code 99 if don't know]

Q504.1. Did you receive LPG connection under the Pradhan-mantri ujjwala yojana?

	Code
Yes	1
No	0
Don't know	99

Q505. Do you use large cylinder (14 kg) or small (<=5 kg)?

	Code
Large	1
Small	2
Both	3

Q505.1. How many large LPG cylinders **(14.2 kg)** do you use in a year?

Q505.2 Of the total large cylinders bought in a year, how many cylinders do you buy from authorized distributors (agency) per year? [Code 99 if don't know]

Number

(Should not be greater than number coded in Q505.1)

Q505.3 Do you ever buy LPG cylinders from the market (apart from the agency)?

	Code
Yes	1
No	0
Don't know	99

Q505.4 How much do you pay for a large cylinder of LPG bought from the market?

[Code 99 if don't know or if it takes too long to find out]

Rs/cylinder

Q506. How many small LPG cylinders do you use in a year?

Number

Q506.1 What is the size of the small LPG cylinder you use? [Code 99 if don't know]

Kg

Q506.2 Of the total small cylinders bought in a year, how many cylinders do you buy from authorized distributors (agency) per year? [Code 99 if don't know]

Number

(Should not be greater than number coded in 506)

Q506.3 Do you ever buy small LPG cylinders from the market (apart from the agency)**?**

	Code
Yes	1
No	0
Don't know	99

Q506.4 How much do you pay for a small cylinder of LPG bought from the market?

 [Code 99 if don't know or if it takes too long to find out]

Rs/cylinder

Q507. On average, in how many days do you refill your LPG cylinder from the authorized dealer? [Ask for large cylinder only, if the household is using both smaller and larger LPG cylinders for cooking]

Days (Fix between 10-300)	
88	Not refilled so far
99	Don't know

Q508. How much did you pay to the distributor/delivery person for the last refill? [Code 99 if don't know]

Rs/cylinder

Q509. How much subsidy did you receive against that refill in your bank account?

Rs/cylinder	
77	*Gave up subsidy*
88	*not aware of the fact that subsidy is credited to bank account*
99	*doesn't know the value of subsidy amount credited*
0	*is certain that there is no subsidy received against the refill*

Q510 Is the domestic gas cylinder delivered at your door step?

	Code
Yes	1
No	0

Q510.a What is the one-way distance in kilometres your household typically travels to get LPG? [Code 0 for less than half km; Code 99 if don't know]

[Allow decimal entry]

Q511. How many days does it usually take between placing an order for LPG refill and receipt of the cylinder? [Code 99 if don't know, 0 if it is delivered the same day]

Q512. How many LPG cylinders (filled or empty) do you currently have in the home?

Q513. Who takes the decision of whether to order a refill? [Mark all that apply.]

Head of the household	1
Spouse of the head of the household	2
Son of the household head	3
Daughter/Daughter-in-law of the household head	4
Other	5

Q514. Do you use LPG for all your cooking needs? [Do not include special occasions.]

	Code
Yes	1
No	0

Ask Q514.1 if coded 0 in Q514

Q514.1 Why do you not use LPG for all your cooking needs? [Read all options]

	Yes	No
LPG is expensive	1	0
LPG is not always available	1	0
Few items are preferred to cook on chulha	1	0
Few items are cooked on electric appliances	1	0
Free dungcake/firewood is easily available	1	0

Q514.a Do you ever use any solid fuels, such as firewood/dung cakes/charcoal etc. for cooking?

	Code
Yes	1
No	0

If coded 0 in Q514.a then skip to Q526

Section 5b - Traditional cooking fuels

Q515. Do you use **firewood and chips** for cooking?

	Code
Yes	1
No	0

If coded 0 in Q515, then skip to Q519

Q516. How frequently do you use firewood for cooking?

	Code
Daily	1
A few times a week	2
A few times a month	3
A few times a year	4

If coded 4 in Q516, skip to Q519

Q517. Do you collect firewood or purchase it from market?

Only Collect	1
Only Purchase	2
Both	3

If coded 2 in Q517 then skip to Q518a

Q517.a Which member of your family collects firewood the most often?

Male member (s) of the family	1
Female member (s) of the family	2
Others, please specify_____	3

If coded 3 in Q516, then skip to Q518a

Q517.b. What is your collection frequency for firewood?

Daily	1
A few times a week	2
A few times a month	3
A few times a year	4

Ask Q517.c and Q517.d only if coded 1 / 2 in Q517.b

Q517.c How much time do you spend each time you go for collection? [Round off to nearest integer]

Hours/collection

[Allow decimal entry]

Q517.d What is the one-way distance in kilometers your household typically travels to collect firewood and chips? [Round off to the nearest integer]

KM

Q518.a On average, how much do you spend on buying firewood every month?

[Code 99 if don't know]

KG/week

Q519. Do you use **dung cakes** for cooking?

	Code
Yes	1
No	0

Q520. How often do you use dung-cake for cooking?

	Code
Daily	1
A few times a week	2
A few times a month	3
A few times a year	4

Q521. Do you ever purchase dung-cakes from the market?

	Code
Yes	1
No	0

Q522. On average, how much do you spend on buying dung-cakes every month?

[Code 99 if don't know]

Rupees/month

Q523. Do you use any other fuel for cooking, such as… [Read aloud all options]

	Yes	No
Agri-residue	1	0
Coal/ charcoal/ lignite	1	0
Kerosene	1	0

Q524. On average, how much do you spend per month on buying these for cooking use?

[Code 99 if don't know, code 0 if obtained for free.]

Rupees/month	
99	Don't know
0	Obtained for free

Section 5c - Electricity based cooking
Interviewer to show pictures

Q526. Please see these pictures and tell me. Do you use any of the following **electric appliances** for cooking in your house? [Read all options]

	Yes	No
a. Electric coil	1	0
b. Induction cook-stove	1	0
c. Micro-wave oven	1	0
d. Electric oven/griller/toaster	1	0
e. Electric rice cooker	1	0

Q527. How often do you use electricity for cooking? Would you say that you use it…

[Read aloud all options; mark only one]

For 'most of the cooking' every day	For 'some of the cooking' every day	Occasionally for some special cooking	Only when other options are not available
1	2	3	4

Q528. If you had to rely only on electric appliances for your cooking needs, what would you say… [Read all statements]

		1	**0**	**99**
A	Would it be feasible or not to meet all cooking needs?	Feasible	Not feasible	Don't know
B	Would it be faster or slower than other alternatives	Faster	Slower	Don't know
C	Would it be cheaper or costlier than other alternatives?	Cheaper	Costlier	Don't now

Section 5d- Cooking satisfaction

[To all households]

Q529. What is your primary fuel for cooking?

LPG gas	1
PNG gas connection	2
Electricity (induction stove/electric cooking coil)	3
Firewood	4
Agricultural residue	5
Cow-dung cake	6
Coal/Charcoal	7
Kerosene	8
Biogas	9
Other, please specify: _____	10

Q530. Overall, how satisfied are you with your current primary cooking arrangement?

Not satisfied	Neutral	Satisfied	Don't know
1	2	3	99

Q531. Generally, how satisfied are you with the availability of this primary cooking fuel to your household?

Not satisfied	Neutral	Satisfied	Don't know
1	2	3	99

Q532. Please answer the below questions for the primary cooking arrangement you currently use. [**Read all options**]

		Yes	No	Don't know
A	Does it take too much time to cook food on it?	1	0	99
B	Is it very difficult to use?	1	0	99
C	Is it adequate for properly cooking the food?	1	0	99

Q533. Do you think there is any negative impact on your health from the use of chulha?

	Code
Yes	1
No	0

Section – 6: Appliance Purchase and energy use behavior

Now I would like to ask few questions related to purchase of new appliances

Q601. Who in your house takes the most decision on the purchase of durable goods like electric appliances? [Read all options; mark only one]

	Code
Male head of the house	1
Female head of the house	2
Both heads of the house	3
Some other member	4
All members of the family	5

Q602. Whenever your family has to buy a new electric appliance, like TV, fridge, or AC, then how important are the following parameters for that buying decision? Please see this picture. Of these options, choose at least 3 parameters and rank them, where 1 means 'most important'.

(Interviewer to display showcards to respondents and code accordingly)

	Rank (1-8)
1. Appliance cost	
2. Popular or well-known brand	
3. Durable and long lasting	
4. Energy savings	
5. Discount schemes	
6. Warranty period	
7. After sales service	
8. Retailer's advice	

Q603. Whenever your family has to buy a new appliance, whom do you consult? (MC)

(Interviewer to display showcards to respondents and code accordingly)

	Code
Don't consult anyone	1
Friends/relatives/ family	2
Online reviews	3
Adv. on TV	4
Adv. on radio/newspapers	5
Vendor/ Sales person	6
Others, please specify: _____	7

Q604. Has anyone in your family ever taken a loan to buy a household appliance?

[Do not include the loans taken for appliances used for income generation]

	Code
Yes	1
No	0

If coded 1 in Q604 the ask Q604.1 else skip to Q604.2

Q604.1 What appliances did you buy with the help of a loan (or EMI)? (MC)

[Select all that apply]
1. Light bulbs
2. Fans
3. Cooler
4. Air conditioner
5. Television
6. Computer/Laptop
7. Refrigerator
8. Mixer-Grinder/ food-processor
9. Washing Machine
10. Electric iron
11. Immersion rod
12. Electric Geyser
13. Electric stove
14. Submersible pumps
15. Others (specify): _____

Q604.2 If given an option, which appliances would you like to buy with the help of a loan (or EMI)? (MC) [Select all that apply]
1. Light bulbs
2. Fans
3. Cooler
4. Air conditioner
5. Television
6. Computer/Laptop
7. Refrigerator
8. Mixer-Grinder/ food-processor
9. Washing Machine
10. Electric iron
11. Immersion rod
12. Electric Geyser
13. Electric stove
14. Submersible pumps
15. Others (specify): _____

16. None

PERCEPTION TOWARDS PRE-PAID METERS

Read aloud: Now I will ask a few questions about pre-paid electricity meters.

Prepaid meters operate in a manner similar to prepaid mobile phones, wherein consumers have to pay for their electricity consumption in advance

Q605. Have you heard about pre-paid meters?

	Code
Yes	1
No	0

Q606. Is your electricity meter a pre-paid meter?

	Code
Yes	1
No	0

Q607. Please answer the below mentioned questions on the benefits or limitations of using pre-paid meters. [Read aloud all options]

Q607.a Have pre-paid meters helped you gain more control on your electricity expenditure or not?

	Code
Yes	1
No	0
Don't know/Can't say	99

Q607.b Has it led to any change in your electricity bill? Has it increased or decreased due to the meter?

	Code
Increase	3
No change	2
Decrease	1

	Code
Don't know/Can't say	99

Q607.c Has it removed the problem of wrong or delayed bills or not?

	Code
Yes	1
No	0
Don't know/Can't say	99

Q607.d Did it have any impact on electricity theft in your area?

	Code
Yes	1
No	0
Don't know/Can't say	99

Q607.e Has it increased your trust in the electricity company or not?

	Code
Yes	1
No	0
Don't know/Can't say	99

Ask Q608-Q609 if coded 0 in Q606, else go to Q610

Q608. If your current meter were to be replaced by pre-paid meter, what could be its benefits or limitations, according to you? Please answer the below questions –

Q608.a Will it help you gain more control on your electricity expenditure or not?

	Code
Yes	1
No	0
Don't know/Can't say	99

Q608.b Will it lead to any change in your electricity bill? Will it increase or decrease?

	Code
Increase	3
No change	2
Decrease	1
Don't know/Can't say	99

Q608.c Will it remove the problem of wrong or delayed bills or not?

	Code
Yes	1

No	0
Don't know/Can't say	99

Q608.d Will it have any impact on electricity theft in your area?

	Code
Yes	1
No	0
Don't know/Can't say	99

Q608.e Will it increase your trust in the electricity company or not?

	Code
Yes	1
No	0
Don't know/Can't say	99

Q609. Will you be interested in getting pre-paid meters installed in your house?

	Code
Yes	1
No	0
Don't know/ Can't say	99

Skip 609.1 for those households who say no in both Q605 and Q609

Q609.1. Do you have any concerns/doubts related to pre-paid meters? [Select all that apply]

No concerns [Skip to Q610]	1
Don't know how will it work	2
Will be difficult to use	3
May lose power in case of delayed payments	4
There should be a mobile app associated with it	5
Waste of taxpayer/public money	6
Some people will lose their job (meter checker)	7
Others (specify):_____	8
Don't know	9

Q610. Can I see your recent electricity bill to understand how much electricity the household actually used?

	Code
Yes	1
No	0

(If coded 0, then fill Meta data and END the survey)

[If the bill is available and can be properly read, then note down the following details]

Q610.a No of billing days:

[Calculate using current and past reading dates; code 9999 if not visible]

Days

Q610.b Billed Units

Units in kWh	
7777	Bill is fixed *and billed units are not shown*
9999	Units not visible

Q610.c Billed amount

Current bill amount in INR (including arrears)	
9999	If amount not visible

Q610.d. Sanctioned Load

Current load (Kw)	
9999	If value not visible

[Allow decimal entry]

Q610.e. Bill date

Date

Q610.f. Total arrears

INR

Q613. Can I take a picture of your electricity bill?

	Code
Yes	1
No	0

If coded 1 click picture.

METADATA

State	
District	
Block/Town	
Village/Ward Name	
Village/Ward Census code	
Read aloud: I am now going to request you to share your name, address and telephone/ mobile number. We may use the address and telephone/mobile number for follow-up questions or survey, if required. If you agree to that, kindly share these details.	
Name	
Address	
Landmark	
Pin Code	
Telephone Number	
Mobile number 1	
Mobile number 2	
Interviewer Id	
Name of Interviewer	
Supervisor's name	

Interview start time		Interview end time	
Length of Interview (seconds)		Date of the Interview	

END OF THE SURVEY

Enumerator: Thank the respondent for giving their precious time for the survey.

For Enumerator:

Q614. Do you have any comments regarding the quality of data entered for this households?

	Code	**Q615.** – Comments
Yes	1	