

Residential building energy demand reduction in India (RESIDE)

– WP4 Semi-Structured Interview

Introduction

For this survey, we would like to explore consumers’ original timing of energy end-use activities in India. The level of concern for energy-saving is influential in their willingness to shift the timings of their daily household activities. We value your time and hope you will enjoy taking part!

The questions assess which energy-using practices within the home appear to be the most adaptable with regard to demand reduction. The aim is to find out which energy end-uses (space lighting, cooling, space and water heating, infotainment, cooking and household utility appliances) the occupants are willing to shift to provide demand side response (DSR). Demand-side response (DSR), the incentivised time-shifting of energy use by consumers away from peak times, is regarded as a potentially effective measure to balance electricity supply and demand.

Consumers’ willingness to shift their daily activities focus on the activities that constitute the major part of domestic energy consumption, i.e. Cooling, Cooking, Dish-Washing, Entertainment, Heating, Laundry and Showering, etc.

Section1: For Surveyor	
Name of surveyor	
Email address of surveyor	
Address of surveyed dwelling: <i>IMPORTANT: Please enter address as: Flat/House number, Building name, Street name, Area/Locality, City, Postal code (Ensure that address entered works in Google maps):</i>	
<u>Address:</u> 	
Dwelling ID of dwelling being surveyed: <i>Note: Please enter the dwelling ID as provided for dwellings in your city.</i>	<u>Dwelling ID:</u>

Section 2: Use of appliances & Energy using behaviours

This section assesses the energy usage pattern among the various end-use appliances (space lighting, cooling, space and water heating, infotainment, cooking and household utility appliances), and also investigates the household energy-using behaviours and daily activities patterns. Aim to find out which energy-using practices within the home appear to be the most adaptable with regard to demand reduction.

Section 2.1: Cooling appliances usage											
Do you aim to keep rooms below a certain temperature?					<input type="checkbox"/>	Yes			<input type="checkbox"/>	No	
<i>If Yes above, what is the temperature? :</i>											
Do you cool every room to the same temperature?					<input type="checkbox"/>	Yes			<input type="checkbox"/>	No	
Weekdays usage: Can you please respond when the following Cooling appliances are usually used during the weekdays in the Summer? <i>Tick all that apply.</i>											
	5 am - 8 am	8 am - 11 am	11 am - 2 pm	2 pm - 5 pm	5 pm - 8 pm	8 pm - 11 pm	11 pm - 2 am	2 am - 5 am	Other (how many times a week), Or Not Applicable		
AC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Ceiling fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Table fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Wall fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Section 2.3: Water Heating appliances usage

Weekdays Usage: Can you please respond when the following water heating appliances are usually used during the Weekdays in the Winter? *Tick all that apply.*

	5 am - 8 am	8 am - 11 am	11 am - 2 pm	2 pm - 5 pm	5 pm - 8 pm	8 pm - 11 pm	11 pm - 2 am	2 am - 5 am	Other (e.g. how many times a week) Or Not Applicable
Instant geyser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Electric boiler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Immersion rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Solar water heater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (please specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Weekend Usage: Can you please respond when the following water heating appliances are usually used during the Weekend in the Winter? *Tick all that apply.*

	5 am - 8 am	8 am - 11 am	11 am - 2 pm	2 pm - 5 pm	5 pm - 8 pm	8 pm - 11 pm	11 pm - 2 am	2 am - 5 am	Other (e.g. how many times a week) Or Not Applicable
Instant geyser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Electric boiler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Immersion rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Solar water heater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (please specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section 2.4: Kitchen appliances usage

Can you please respond when following Kitchen appliances are usually used during the day? *Tick all that apply.*

	5 am - 8 am	8 am - 11 am	11 am - 2 pm	2 pm - 5 pm	5 pm - 8 pm	8 pm - 11 pm	11 pm - 2 am	2 am - 5 am	Other (how many times a week), Or Not Applicable
Refrigerator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microwave/ oven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rice cooker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Electric cooker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Induction plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Electric kettle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Electric chimney	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Toaster	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Exhaust fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dishwasher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water pump / motor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Others(specify below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Do you turn off the refrigerators during the Winter Months?

<input type="checkbox"/>	During entire winter months
<input type="checkbox"/>	For a few hours in the day in some seasons
<input type="checkbox"/>	For a few hours everyday (e.g. during night)
<input type="checkbox"/>	When going on a vacation

<input type="checkbox"/>	Never
<input type="checkbox"/>	Not applicable

Section 2.5: General household appliances / activities

Can you please respond when the following General appliances are usually used during the day? *Tick all that apply.*

	5 am - 8 am	8 am - 11 am	11 am - 2 pm	2 pm - 5 pm	5 pm - 8 pm	8 pm - 11 pm	11 pm - 2 am	2 am - 5 am	Other (e.g. how many times a week) Or Not Applicable
Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Entertainment/ Watch TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Music system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Smart Charging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Washing machine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Iron	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Desktop computer/Laptop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Pumps/motor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water heating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Air purifier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Others (<i>specify below</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section 2.6: Indoor air quality related occupants' behaviours and activities

Does anyone regularly smoke indoors here?

Yes No

If yes above, about how many cigarettes per day are smoked in your home?

Less than 10 Between 10 and 20 Between 20 and 40 40 or more

Where does smoking usually take place? *Tick all that apply.*

Outdoor Living room Kitchen Bedroom

Bathroom Other places (*please specify*):

Do you have any electric fans, which extract air from the home to the outside?

Yes No

If yes above, in which of your rooms do you have extract fans and how often they are used? *Tick all that apply.*

	Daily	A few times a week	A few times a month	A few times a year	Not applicable
Kitchen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bathroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other places (<i>please specify</i>)					

During the last four weeks, have any of the following activities been carried out in your kitchen/living room/bedroom? *Tick all that apply.*

Painting walls, woodwork etc Other decorating New chipboard furniture
 New flooring Building carpentry Use of cleaning materials, e.g. bleach
 Use of insecticides, fungicides etc Use of air fresheners - including pot pouring None of these

Section 2.7: Energy behaviours at home

How often do you or other family occupants do the following things:

	Never	Rarely	Sometimes	Often	Always	Not applicable

Leave the fans on when no one at home or go out for few hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leave the window open when the air-conditioner is on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leave the air-conditioner on when go out for few hours or no one at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leave the room heaters on when go out for few hours or no one at home in Winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leave the TV on but no one is watching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leave a mobile phone charger on when it's not in use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boil the kettle with more water than you need?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Switch off appliances completely rather than standby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 2.8 Overall usage

What do you think could be the **most energy-consuming device** in your home? *Answer below*

Overall, can you please respond how many **HOURS per day** are the following appliances used or activities happened on an average in your house?

	Less than 1 hour per day	1-3 hours per day	4-6 hours per day	7-9 hours per day	10-12 hours per day	More than 12 hours per day	Other (how many times a week) Or Not Applicable
Entertainment/TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Smart Charging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cooking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Laundry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Desktop computer/Laptop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dish-washer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water pump/motor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cooling/Heating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water heating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Air purifier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Others (<i>specify below</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Can you please respond which of these **MONTHS in a year** were the following appliances used on an average in your house? *Tick all that apply*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Not applicable
AC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceiling fans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geyser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Desert cooler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air cooler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Room heater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 3: Willingness to change energy using behaviours

In India, electricity demand is very high during the day. The peak consumption hours are 6pm to 8pm. Using non-essential appliances during peak time increases stress on the electricity grid and leads to increased energy pricing.

This section is designed to find out which energy end-uses (space lighting, cooling, space and water heating, infotainment, cooking and household utility appliances) the occupants are willing to shift to provide demand side

response (DSR). In this study, DSR can be simply explained as shifting timing of energy use in response to different energy prices. DSR, the incentivised time-shifting of energy use by consumers away from peak times, is regarded as a potentially effective measure to balance electricity supply and demand.

Section 3.1: The occupants-perceived difficulty levels on changing their energy using behaviours

In relation to the following scale, **how important** do you think it is to **Reduce** household energy use?

Not important	Slightly Not Important	Unsure	Slightly Important	Very Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

To what extent, do you **Agree or Disagree** with the following statement: **I feel capable of reducing the energy use in my home.**

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strong Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If there was a time in the day/night when the following activities could be done in a cheaper or more energy efficient way (e.g. flexible use option, ecological or economy programme or device, cheaper gas/electricity rate), **how easy or difficult do you find it to shift the time in the day/night that the following activities are done in your home?**

	Very easy	Quite easy	Neither easy nor difficult	Quite difficult	Very difficult	Not applicable
Cooking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dish-washing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entertainment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laundry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water pumping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water heating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 3.2: Occupant's willingness to switch their daily activities

Please state your Willingness to switch following your daily activities to the different time of the day when it is not high demand, as expressed from Very Unlikely to switch to Very Likely to switch.

	Very Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Very Likely
Cooking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dish-washing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entertainment/Watching TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smart Phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Desktop computer/Laptop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cooling	AC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Celling fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Desert cooler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Air cooler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laundry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geysers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3: Time shifting on household's energy using activities

If you would like to shift the using time of the following daily household activities, please state your **willingness to shift** the following end-use activities (including no shift, to early morning and to late evening). *Tick all that apply*

	No Change	Shift to 0:00~7:00	Shift to 9:00~11:00	Shift to 14:00~16:00	Shift to 20:00~0:00
Cooking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dish-washing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entertainment/watching TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Desktop computer/Laptop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cooling	AC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ceiling fans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Desert cooler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Air cooler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laundry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geysers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.4: Motivations to change occupant's energy behaviours

What could **motivate** you to use a washing machine during the night instead of morning? (*you can select multiple options*)

<input type="checkbox"/>	4 ₹ per hour penalty for using it during the day
<input type="checkbox"/>	2 ₹ per hour discount for using it during the night
<input type="checkbox"/>	Free electricity for using it during night
<input type="checkbox"/>	I won't change my usage pattern

If you have AC at home, what could motivate you to change the temperature of AC to 24°C? (*you can select multiple options*)

<input type="checkbox"/>	10 ₹ per hour penalty for AC temperature less than 24°C
<input type="checkbox"/>	8 ₹ per hour discount for AC temperature greater than 24°C
<input type="checkbox"/>	Free electricity for AC temperature greater than 24°C
<input type="checkbox"/>	I won't change my usage pattern

What could motivate you to pre-heat water in geysers at night? (*you can select multiple options*)

<input type="checkbox"/>	13 ₹ per hour penalty for using it during the day
<input type="checkbox"/>	11 ₹ per hour discount for using it during the night
<input type="checkbox"/>	Free electricity for using it during night
<input type="checkbox"/>	I won't change my usage pattern

Are you willing to install time-based switches to operate washing machines geysers and at night time and control them remotely?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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If no, what is the main concern for you choose not to do?

<input type="checkbox"/>	The initial cost to install the switches
<input type="checkbox"/>	Lack of the knowledge on set up and control the time-based switches
<input type="checkbox"/>	I don't want to change my usage pattern
<input type="checkbox"/>	Others (<i>please specify</i>)

Section 4: Other questions:

Q1: Do you have an indoor thermometer?

- If yes, what is the indoor temperature during the summer months?
- At what indoor temperature is it comfortable for you?

Q2: What actions have you taken to save on your energy bill? E.g. use the washer at the night time when it costs less, finish cooking before the high energy demand period, etc. **(Process food when low; do things while low (e.g. cleaning, laundry))**

Answer here:

Q3: What information do you normally check in your electricity bills? (you can select multiple options)

- Amount to be paid
- Consumed energy
- Usage comparison
- I don't check my electricity bill

Q4: What do you think about a "Smart Home Energy Management System"?

- Helps in saving household energy
- Helps in automatically turning off/on appliances
- Both of the above
- None of the above
- I don't know

Q5: For what appliance(s) are you interested in knowing the electricity consumption in your home? (you can select multiple options)

<input type="checkbox"/>	AC	<input type="checkbox"/>	Refrigerator	<input type="checkbox"/>	Washing machine	<input type="checkbox"/>	Geyser
<input type="checkbox"/>	Dish Washer	<input type="checkbox"/>	TV	<input type="checkbox"/>	Oven/microwave	<input type="checkbox"/>	Water motor
<input type="checkbox"/>	Iron	<input type="checkbox"/>	Mixer	<input type="checkbox"/>	Other (<i>Please specify</i>)		

Q6: What information, if any were you given on how to keep your home at a comfortable temperature (e.g. user manual, verbal instructions, etc).