

Electricity Consumption Report
Household: Sharma Residence
Location: Pune, India
Month: January 2024

1. Overview of Monthly Consumption

- **Total Energy Consumed:** 320 kWh
- **Average Daily Consumption:** 10.32 kWh
- **Peak Usage Time:** 7:00 PM - 10:00 PM
- **Minimum Usage Time:** 2:00 AM - 5:00 AM

2. Hourly Consumption Summary

The household's electricity usage was recorded hourly over 31 days, and the average hourly usage is provided below:

Hour	Average Consumption (kWh)
12 AM	0.2
1 AM	0.1
2 AM	0.1
3 AM	0.1
4 AM	0.1
5 AM	0.15
6 AM	0.3
7 AM	0.4
8 AM	0.5
9 AM	0.6
10 AM	0.8
11 AM	0.9
12 PM	0.85
1 PM	0.8

2 PM	0.7
3 PM	0.65
4 PM	0.6
5 PM	0.7
6 PM	0.9
7 PM	1.2
8 PM	1.5
9 PM	1.8
10 PM	1.4
11 PM	0.8

3. Device-wise Consumption Breakdown

Device	Average Daily Usage (kWh)	Monthly Usage (kWh)
Refrigerator	2.5	77.5
Air Conditioner	3.0 (used 10 days)	30.0
Washing Machine	0.8 (used every 3 days)	8.4
Water Heater (Geyser)	1.2	37.2
Lights & Fans	1.5	46.5
Television	0.6	18.6
Laptop & Chargers	0.4	12.4
Kitchen Appliances	2.0	62.0
Miscellaneous	0.3	9.3

4. Analysis & Recommendations

- Peak Usage:** The peak period (7:00 PM - 10:00 PM) is mainly due to lighting, cooking appliances, and TV usage. Reducing unnecessary lights and optimizing cooking schedules can help.
- Air Conditioner Usage:** Although used for only 10 days, the AC contributed significantly. Ensuring proper insulation can reduce this consumption.

- **Water Heater:** The geyser accounts for 11.6% of total consumption. Using it efficiently and opting for solar water heating can be cost-effective.
- **Refrigerator:** A major contributor at 24% of total consumption. Ensuring proper maintenance and avoiding frequent door openings can improve efficiency.

5. Suggestions for Reducing Consumption

1. Switch to LED lights to reduce lighting energy use.
2. Use energy-efficient appliances with higher BEE star ratings.
3. Optimize the usage of high-consumption devices like geysers and ACs.
4. Consider installing solar panels to offset energy costs.
5. Use smart plugs and timers for better control over appliance usage.

Prepared by: Electricity Monitoring System

Date: 1st February 2024