

Energy Efficiency Analysisby Lektric

Note on Data Validation: The provided data indicated 0 daily use hours for the Air Conditioner . To provide a meaningful analysis and demonstrate potential savings for an appliance that is typically used, we have assumed a typical daily usage of 8 hours for the calculations below. If the appliance is not used, its current electricity cost is 0.

Summary of Appliance Consumption

Appliance	Power (W)	Eff. Power (W)	Daily Hrs	Daily kWh	Monthly kWh	Monthly Cost (PHP)	Vol. (kVA)
Air Conditioner	1200	1140.00	8 (assumed)	9.12	273.60	3685.25	N/A

Energy Hogs Identified

Based on the calculated monthly costs, the following appliance is identified as an "Energy Hog":

- **Air Conditioner:** PHP 3685.25/month

Detailed Recommendations

Air Conditioner

Your Air Conditioner, at an assumed 8 hours of daily use, is a significant contributor to your electricity bill. Here are ways to reduce its consumption:

A. Usage/ Behavioral Recommendations (Quick Wins)

- **Reduce Daily Use Hours:** By reducing your daily air conditioner usage from 8 hours to 6 hours, you can significantly cut down on energy consumption.
 - Estimated Monthly kWh Savings **68.40 kWh**
 - Estimated Monthly Cost Savings **PHP 921.43**
- **Optimize Usage Behavior:** Adjusting your thermostat higher by 1-2 degrees (e.g., from 23°C to 25°C), using 'eco' or 'sleep' modes, and regular cleaning of filters can reduce its effective power usage from 95% to 80%.
 - Estimated Monthly kWh Savings **43.20 kWh**
 - Estimated Monthly Cost Savings **PHP 581.91**

B. Appliance Replacement Recommendations (Long-Term Savings)

- **Upgrade to an Energy-Efficient Inverter Model:** Replacing your current 1200W Air Conditioner with a more efficient 800W inverter-type unit can yield substantial long-term savings.
 - Estimated Monthly kWh Savings **91.20 kWh**
 - Estimated Monthly Cost Savings **PHP 1228.29**

Total Possible Monthly Savings

By implementing a combination of the most impactful recommendations, such as upgrading to an 800W inverter air conditioner, reducing daily use hours, and optimizing usage behavior to 80% efficiency:

- New Monthly kWh: 115.20 kWh
- New Monthly Cost: PHP 1552.73
- **Total Possible Monthly Savings **PHP 2132.52**** (from original PHP 3685.25)