Evidence

1. The Rising Problem of High Electricity Bills

- Energy Costs: In India, residential electricity tariffs range from ₹3 to ₹10 per kWh, and many middle-class families struggle with increasing bills.
- **Inefficiency:** Many homes unknowingly consume excessive electricity due to inefficient usage, vampire loads (devices consuming power even when off), and old appliances.

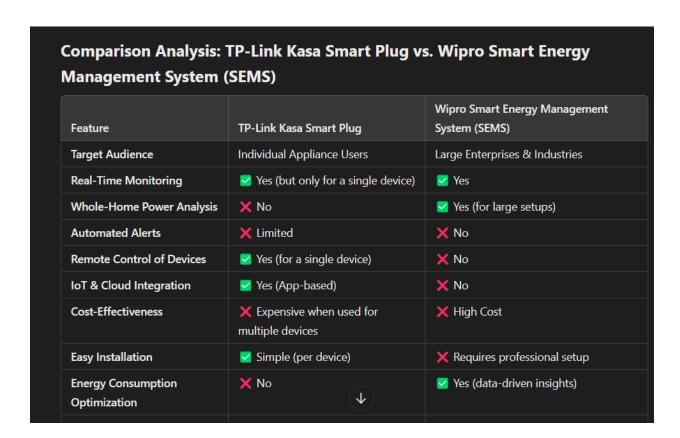
2. Lack of Awareness & Monitoring

- Most people **don't track their power consumption** in real-time. They only see the final bill and have no idea which appliances consume the most.
- Manual monitoring is inconvenient. A smart solution is needed to analyze, alert, and provide suggestions to optimize power usage

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EMeter (MM) Status OK
ELoad : 13 KV
Phase : 3
Prv Rd Dt : 06/05/2023
Prs Rd Dt : 06/07/2023
Ent Rd(OMF): 1
Readings & Cons. (MM)
Sunit Curr Prev
SukwH/R/I 11889 11074
                         Cons
            Curr Prev
                                 570
                        815
Cons. recorded on Changes
                          648
BIII Details
Neter Rent
                          450.00
                          0.00
                           0.00
                        12435.50
Duty
Buel Sur.
                        1243, 55
                          131, 57
Monthly Fuel Sur.
                        131, 67
                          -0.39
Bill Amount
PACO/ADJ
Surcharge
WAF
Payable
                        14392.00
                         2139.00
                          50.00
                          30.00
                : 16611.00
```

Key Findings

- **High Electricity Bills:** ₹2500/month (~7% of total income).
- No Real-Time Monitoring: Unaware of which appliances consume the most power.
- Energy Wastage: ACs, TVs left on; phantom loads from plugged-in devices.
- Potential Savings: EcoWatt can reduce bills by 20-30% (₹500-750/month).
- Need for Smart Management: Helps optimize usage, reduce costs, and promote energy conservation.



Feature	Kenza (Energy Monitoring System)	Solar Energy Solutions (Solar Panels & Batteries)
Primary Function	Tracks electricity consumption	Generates electricity from sunlight
Energy Savings	Helps reduce wastage	Reduces dependency on the grid
Initial Investment	Low	High (Installation cost)
Long-term Savings	Moderate	High (Lower electricity bills over time)
Real-time Monitoring	✓ Yes	X No (Unless paired with a smart system
Remote Control of Devices	× No	× No
Dependence on Grid Power	✓ Yes (Relies on electricity provider)	X No (Can work independently with storage)
Sustainability	× No direct impact	☑ 100% Renewable & eco-friendly
Maintenance	✓ Minimal	* Requires periodic cleaning & maintenance
Integration with Smart Tech	× No	Possible with smart inverters

Shortcomings of Kenza (Energy Monitoring System)

- 1. **Does Not Generate Power** Only tracks and optimizes usage; does not provide an alternative energy source.
- 2. **Dependent on Grid Electricity** Cannot function without an existing power supply.
- 3. **Limited Cost Savings** Helps reduce waste but does not significantly lower electricity bills like renewable sources.
- 4. **No Direct Environmental Benefit** Unlike solar or wind power, it does not reduce carbon emissions.
- 5. **No Backup Power** Does not help during power outages.
- 6. **Lack of Smart Automation** Cannot automatically turn off high-consuming devices unless paired with additional smart tech.
- 7. **Initial Setup & Learning Curve** Users must actively monitor and adjust their habits to see savings.