

Smart Electricity Consumption Monitoring System (SECMS)

Real-time, AI-powered Energy Monitoring for Smarter Living



The Problem: Inefficient Energy Management

No Real-time Data

Traditional meters offer no immediate usage insights.

Energy Wastage

Leads to excessive consumption and inefficient habits.

Billing Inaccuracies

Lack of transparency causes disputes and distrust.

No Appliance Insights

Users can't identify high-energy devices.

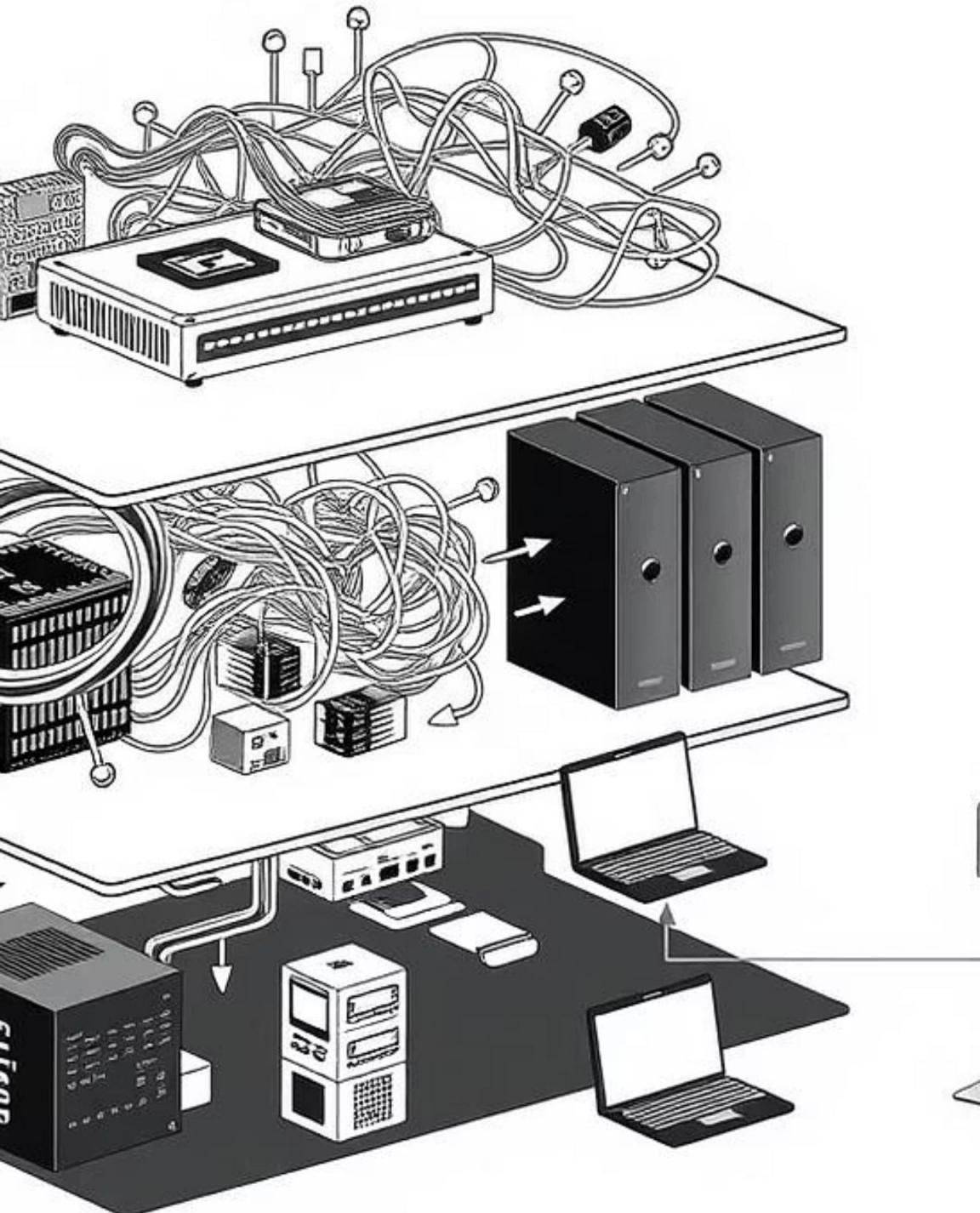
Approximately 30% of residential electricity is wasted due to these inefficiencies.

Our Solution: SECMS

SECMS is an innovative IoT-enhanced retrofit module that transforms existing electricity meters into smart, real-time monitoring systems.

- Real-time usage tracking
- AI-powered consumption analysis
- Secure bill payments
- Personalized energy-saving goals
- Affordable: ₹9500 per household
- Aligns with SDG 7: Affordable and Clean Energy





System Architecture



Hardware Layer

Microcontroller (Arduino/RPi), current/voltage sensors, communication modules.

Connectivity Layer

Secure data transmission via Wi-Fi or LoRa to cloud servers.

Data Processing Layer

Cloud servers analyze consumption using AI and data analytics.

Application Layer

Mobile app interface for users and utility providers.

Key Features



Real-time Monitoring

Track consumption via mobile app.



AI Insights & Goals

Optimize usage with smart recommendations.



Peer Comparison

Compare usage with others.



Secure Payments

Government-authorized bill payments.



WattFinder Module

Appliance-level consumption insights.



Dynamic Alerts

Anomaly detection and usage alerts.

Competitive Analysis

| Installation | Retrofit | Retrofit | New Meter | Software |
|----------------------|------------------|----------|-----------|----------|
| Appliance Monitoring | Yes (WattFinder) | Yes | Limited | Yes |
| AI Features | Advanced | Basic | Limited | Advanced |
| Affordability | ₹9500 | High | Medium | High |
| SDG Alignment | Yes | Partial | Partial | Partial |
| Payment Integration | Yes | No | Yes | No |

Market Size & Opportunity

250M+ ₹9500 100%

Households

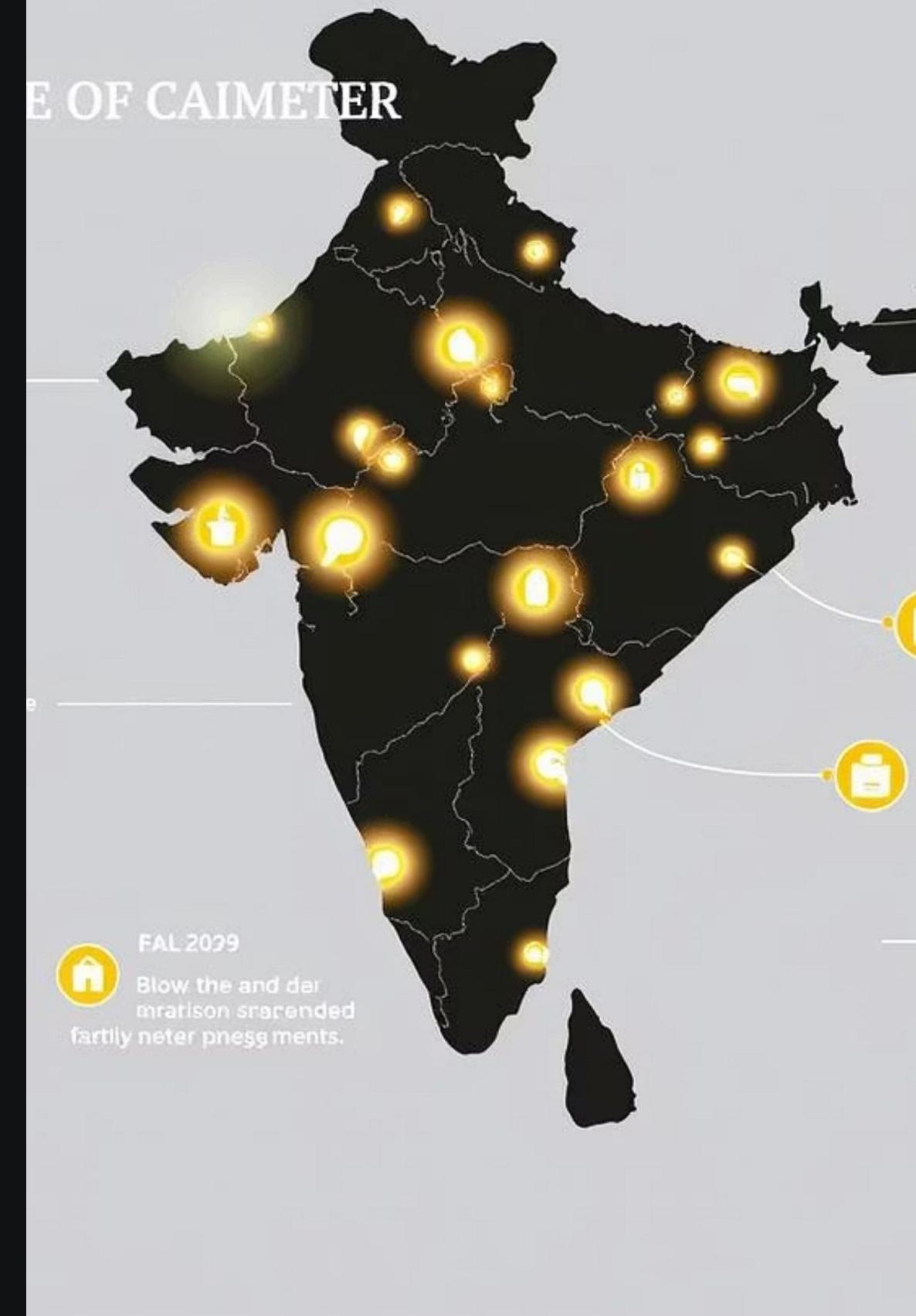
In India and developing nations without smart meters.

Unit Cost

Significantly more affordable than competitors (₹25,000+).

Market Potential

Opportunity for both urban and rural deployments.



Business & Revenue Model

B2C Sales

Direct sales to individual households.

B2B2G Partnerships

Collaborations with utility providers and government bodies.

Licensing Model

Licensing SECMS technology to other regions/companies.

Add-on Sales

Revenue from WattFinder plug-in modules.

Premium Analytics

Subscription for advanced app-based features.

Vision, Scalability & Impact

Supports India's Energy Goals: Aligns with national energy efficiency initiatives.

Global SDG 7 Alignment: Promotes affordable and clean energy

Scalability: Potential to reach 10M+ homes across diverse regions.

Integration: Seamless integration with government energy schemes.

Carbon Footprint Reduction: Empowers users to reduce energy waste.





THANK YOU