

# 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.

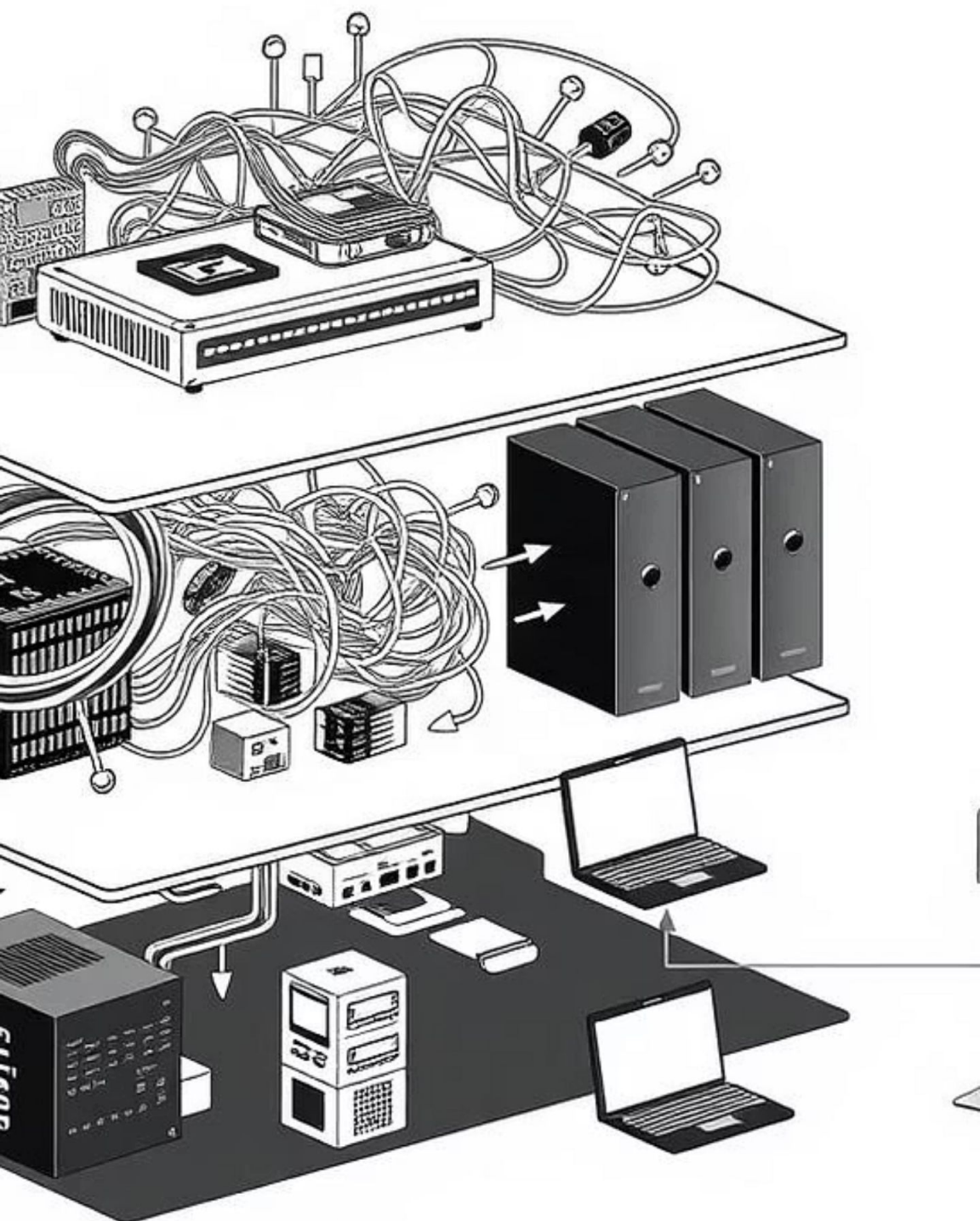
Approximately 30% of residential electricity is wasted due to these inefficiencies.

# 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

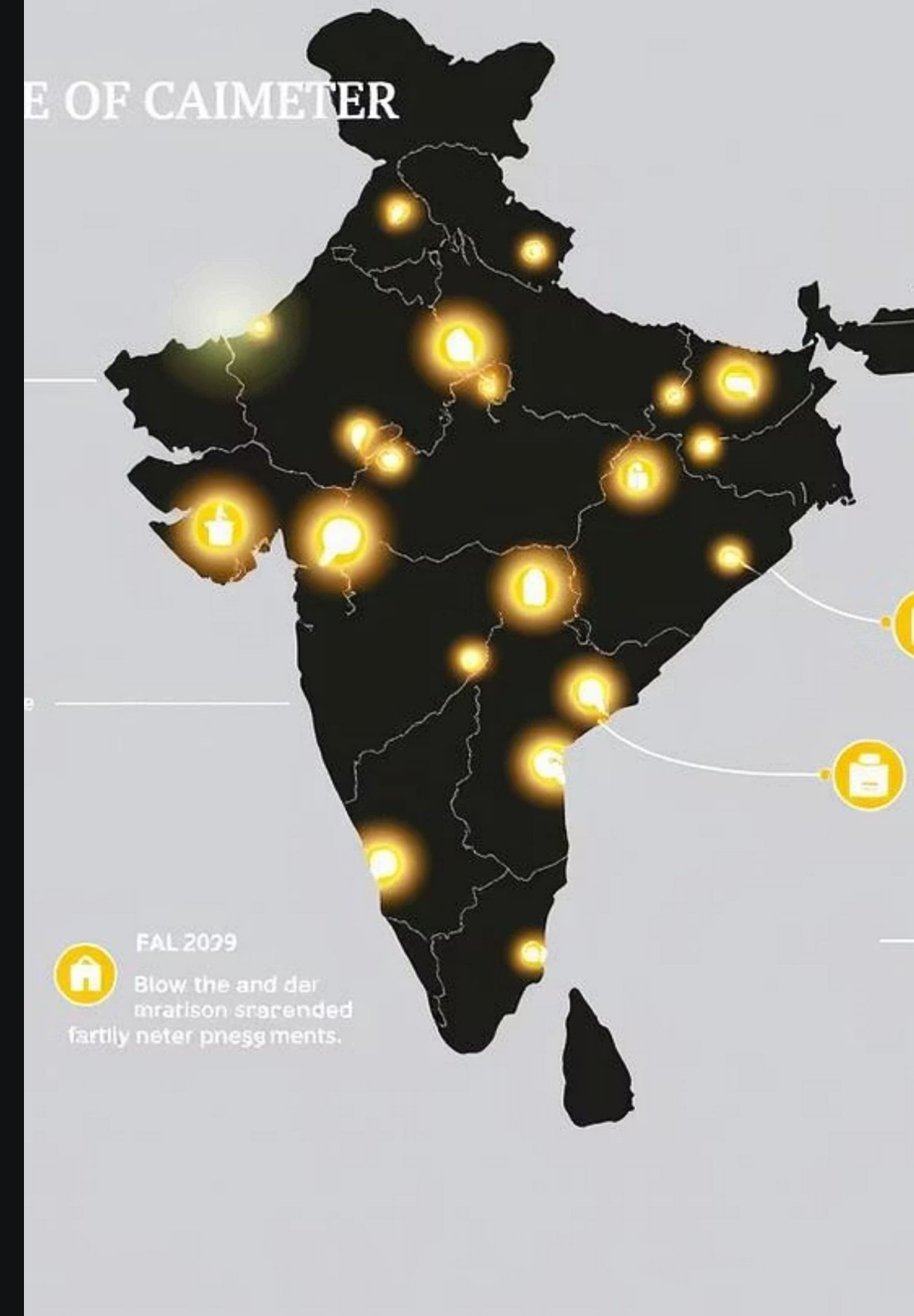
In India and developing nations without smart meters.

## 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