

Intelligent Energy Solutions for Smarter Buildings

Electric rates are rising sharply with proposed increases from utilities like Con Edison, National Grid, and NYSEG ranging from **11% to over 35%**.

These hikes are driven by infrastructure upgrades, operating costs, and climate-related resiliency investments. For facility managers overseeing buildings, this means **higher monthly bills**, tighter budgets, and increased pressure to find smarter ways to manage energy.

This is where intelligent energy management becomes essential.

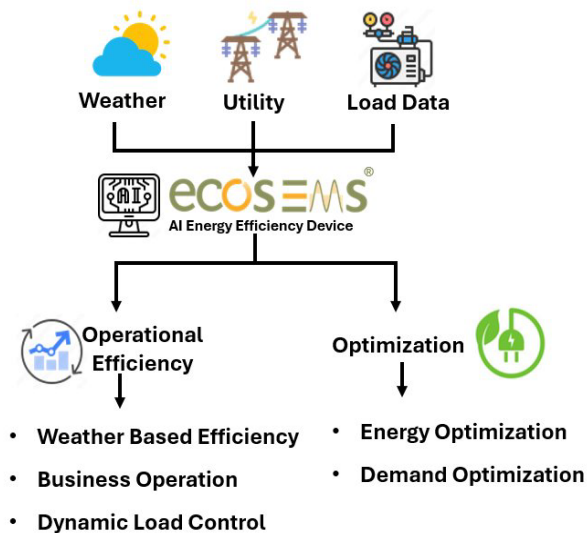
ecoSEMS, our **patented Smart Energy Management System**, is designed to work with your existing Building Management System (BMS) not replace it. It adds a layer of **AI-powered predictive analytics** that helps you anticipate demand, optimize usage, and reduce waste in real time. In a landscape of rising costs, ecoSEMS empowers facility managers to take control of energy performance and make data-driven decisions that protect budgets and improve operational efficiency.

Our flagship platform, **ecoSEMS**, is a patented energy management system designed to:

- Seamlessly **integrate with existing Building Management Systems (BMS)** to enhance control and visibility across facilities
- Analyze real-time building load data and automate energy-saving decisions
- Use AI and machine learning to forecast energy demand and optimize usage
- If you already have renewable sources installed, it will support solar, battery storage, and microgrid solutions for peak shaving and backup optimization.
- Enable **proactive maintenance** and performance tuning through digital twin technology

The Working of ecoSEMS [Simplified]

Key Factors Considered in Predictive Analysis



Weather Based Efficiency :

ecoSEMS uses real-time weather data to anticipate building load shifts and adjust energy usage accordingly helping you stay ahead of demand spikes and seasonal inefficiencies

Energy Optimization: Utility Rate Awareness

- Utility companies charge different electricity rates depending on the time of day. Peak hours (expensive) & Off-peak hours (cheaper)
- ecoSEMS is designed to understand and respond to complex utility rate structures—automatically optimizing energy consumption to avoid peak charges and take advantage of off-peak pricing.

Operational Efficiency:

Dynamic Load Control

Used to control the equipment by running at a reduced speed, they adjust based on demand. Reduces energy waste by running equipment only when necessary. Works with AI-based demand forecasting to ensure that motors operate at optimal efficiency.

CONCLUSION



At the heart of it all is a **simple, compact box**. Don't let its size fool you. This patented technology is a **game changer**. It plugs into your existing Building Management System (BMS) and instantly adds a layer of intelligence that transforms how your buildings consume energy.

In a time when electric rates are climbing and budgets are tightening, **every kilowatt saved is a dollar earned**.

All of this happens while maintaining your building's comfort, safety, and performance because savings should never come at the cost of service.

We look forward to showing you how this small solution can make a big impact.

Thank you for taking the time to explore what ecoSEMS can do for your facilities.

Please reach out if you would like us to give you a demo.



Jyothi Puli

M.S. in Computer Science and Engineering
AI Researcher | Energy Modeler
Passionate about sustainable tech,
intelligent systems, and data-driven innovation.