



ENERGY, WE HAVE YOU COVERED.

# ENERGY MANAGEMENT SYSTEM.

## WHITEPAPERS

FOR THE WORLD OF INDUSTRIAL  
/COMMERCIAL ESTABLISHMENTS.

### AUTHORS



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AUTOMOBILE



BUILDING



ELECTRIC



TEXTILE



CEMENT



POWER PLANT



# WHAT'S INSIDE?

- What is Energy Management?
- Why is This Important?
- What's The Snag?
- A Comprehensive System From the Cloud & in the Cloud
- Elmeasure Approach
- Features that Result in Sustainability
- A Cognitive & An Intuitive Solution - Architecture
- Meet EL-Net EMS - For all Your Energy Related Issues.
- Screenshots
- Energy Billing System
- Conclusion



## WHAT IS ENERGY MANAGEMENT?

A process to measure, monitor, save & see the energy consumption & losses in detail. Either general consumption by residential, enterprises or by machines in manufacturings & additional wastage from the mundane assets, see every data on screen & let the system provoke you the action.

## WHY IS THIS IMPORTANT?

*"Because It is a part of everyday life & will be in future."*

Energy is consumed by many living, non-living, tangible & Intangible things on the planet. But, there is no limit or barricade to its consumption until it was mandated. Businesses with more financial support can pay more & consume more but after some point of time, there will be a gap until it was

## WHAT'S THE SNAG?

Machines consume a lot of energy & the new living trends are completely incapable without power. In such a scenario, there is a mere requirement for tracking every unit of energy consumed & every unit to be saved wherever possible.

A cognitive system that is connected to the complete system & analyze every flow of the energy eventually recognizing the malfunction, additional consumption, comparisons, etc.

- Monitoring multiple modules is very complicated & consumes a lot of time.
- Machine depreciation lead additional energy consumption than usual & recognizing the bottlenecks is the heck of a problem.
- If the problems were recognized, need the controlling steps to face the issue at the earliest.
- A continuous check & recheck on the consumption patterns for the predictive maintenance would be an advantage.
- Analysis & data reports for the change in savings, Losses & RoI
- All together as a comprehensive system with greater user interface, easy to maintain & at the reliable cost

**Energy is central to nearly every major challenge & opportunity that world faces today. It demands a Comprehensive System**



# OUR > APPROACH.



Monitor



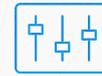
Communicate



Data



Save



Control



Analyze

## FEATURES THAT RESULT SUSTAINABILITY.



### CLOUD HOSTING

Remote monitoring  
& Controlling



### ASSET MONITORING

taylor-made user-  
friendly dashboard



### AUTOMATE

Reduced human  
dependency



### ENSURE UP-TIME

Get on screen  
Email/SMS alerts



### ANALYZE BETTER

improved insights

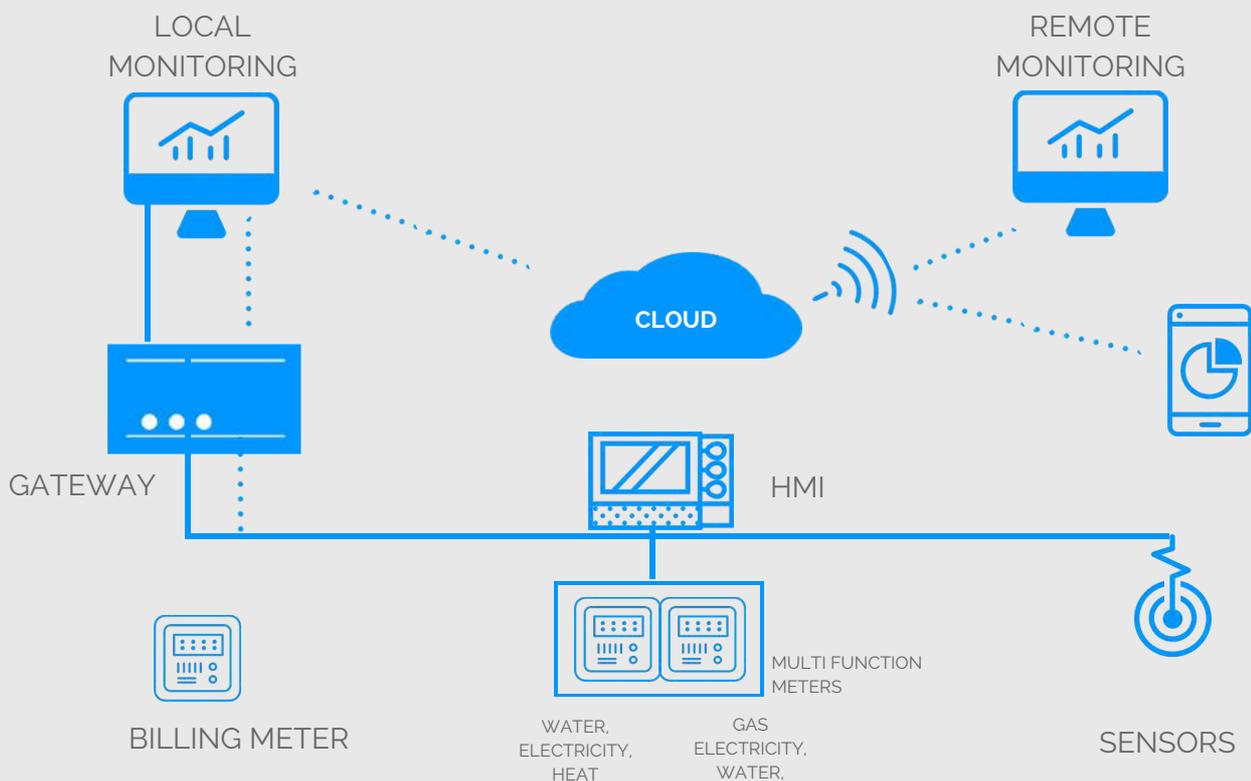


### SAVE ENERGY

Consume where  
required, save more

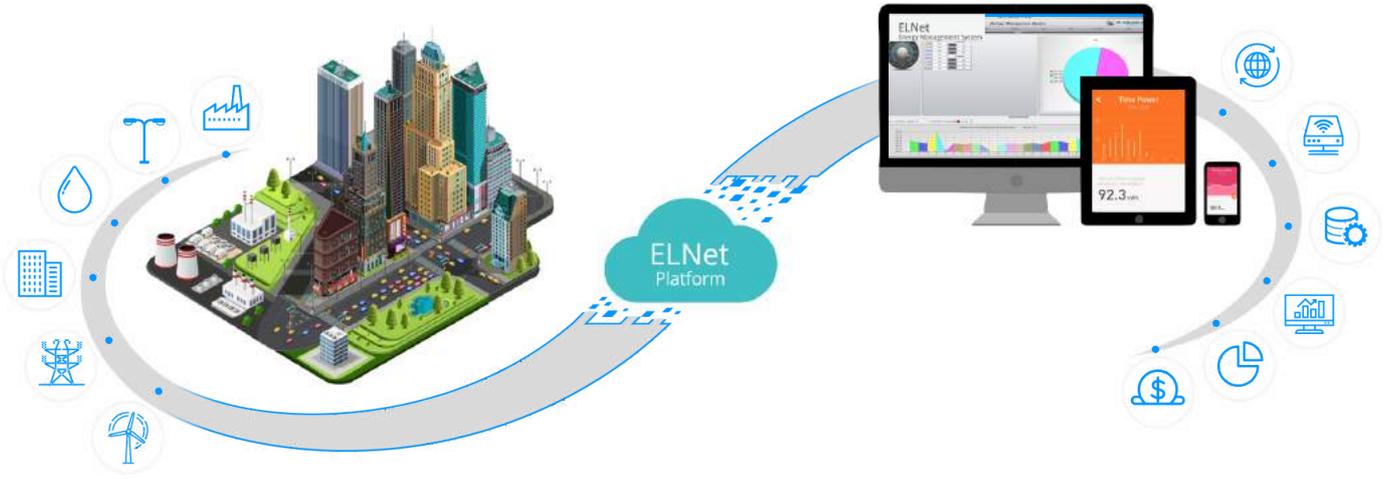


# A COGNITIVE AND AN INTUITIVE **SOLUTION - ARCHITECTURE**



# MEET EL-NET EMS

FOR ALL YOUR ENERGY RELATED ISSUES.



## IOT PLATFORM

For Comprehensive Monitoring

## ROBUST PRODUCTS

For Accurate Data Readings

Our Solution designs are based on classical **MSP430 to arm cortexm4 based SOCs.**

Our Products are developed at the **DSIR approved Research & Development Center.**

### WIRED COMMUNICATION

Modbus  
DLMS  
MQTT  
MQTT-S  
PLC  
LON  
BACnet

### WIRELESS COMMUNICATION

- Zigbee
- Wi-Fi
- GPRS communication.

### WE ARE BUILT ON

- Net-C#
- Vb.Net
- ASP.Net
- Java
- C/C++
- HTML5
- CSS
- Java Script

- Supports third party server integration
- Compatible for OPC connectivity
- Process parameter integration.

### GATEWAY



- Programmable DG switchover time
- Manual reset
- Communication option
- DIN Rail
- SMPS based design
- Intelligent re-connection

### MULTIFUNCTION METERS

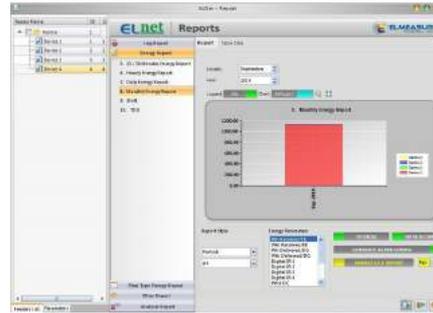


- Viewing present, forecast max demand and additional load on the same page
- Compact 96x96x45mm
- 4 Relay control output
- Remote firmware

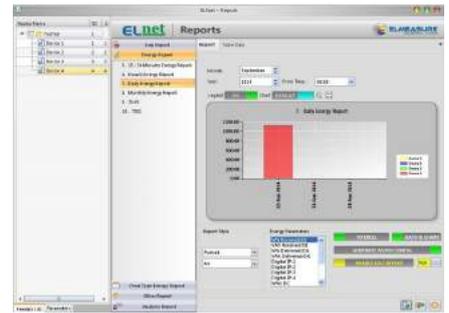
- Compatible with third party devices through RS485 & Modbus RTU protocol.

# SCREENS & REPORTS

## LOG REPORTS



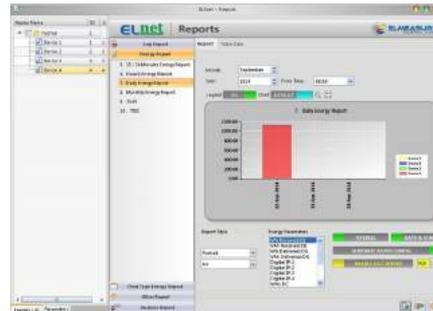
## ENERGY REPORTS



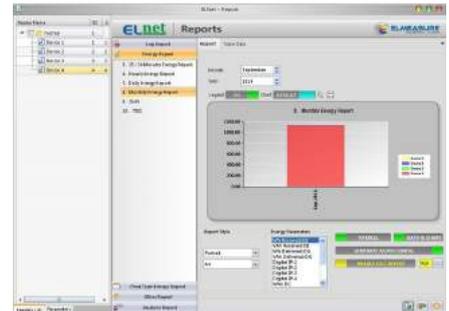
## FLEXI ENERGY REPORTS



## ANALYSIS REPORTS



## OTHER REPORTS



## APPLICATIONS: UPSTAGE THESE MAJOR HURDLES

- Energy Cost Vs. Production/Utilization/Loss
- Raise in Energy Cost adding to Production Cost
- Production Loss
- CAPEX Decision
- Manpower Planning
- Accurate MIS Reporting/Decision Making
- Productivity Study/Control
- Breakdowns, Process Interruptions
- Frequent Equipment Tripping/Equipment Deterioration
- Equipment inefficiency

## ENERGY BILLING SYSTEM

A Consolidated system for a group of individual shops, malls, flats, etc. to get,

- Energy Bill for any shop/office/residence/meter
- Consolidated Energy Bill

## AT A GLANCE

- The EBS generates the individual tenant bill and consolidated bill with just one click.
- Common area power charges are automatically calculated and distributed between the users based on floor area. This gives complete confidence to the user and great relief to the Service provider.
- The option of data entry for No. of slabs, Slab rates, Fixed charges, Bill No. & Date, Tax percentage, Special instructions, Miscellaneous charges etc.
- Other billing information like Registration Nos, Terms and conditions etc.. can also be integrated into the bill.
- Dual Source Energy Meters are used to read EB as well as DG energy consumption.

## THE BEST PART?

EL-NET witnessed the fastest average ROI in the Industry.

**A COMPREHENSIVE SYSTEM  
REFINED FOR THE FUTURE.**

## HIT A SNAG



Street Light  
Management  
System



Textile Process  
Management  
System



Breaker  
Status  
Monitoring



Pump  
Automation  
System



Data Center  
Management  
System



Water  
Management  
System

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**ELMEASURE**  
Possibilities... Infinite