



**Ladder
Logix**

EMS PROJECT

- OVERVIEW
- DASHBOARD
- REAL TIME
- HISTORICAL
- ALARMS
- REPORTS
- TARGETS
- DEVICES
- SETTINGS
-  **CARBON FOOTPRINT**

12.45 tCO₂
Today



↓ 8.5% vs Last Month

ENERGY OVERVIEW



TOTAL CONSUMPTION
28,563 kWh
↑ 12.5% vs Yesterday



TOTAL DEMAND
4,692 kW
↑ 8.3% vs Yesterday



TOTAL COST
\$ 4,325 USD
↑ 9.2% vs Yesterday



POWER FACTOR
0.98 Leading
↑ 2.1% vs Yesterday



GRID
45%
12,853 kWh



SOLAR
30%
8,568 kWh



WIND
15%
4,284 kWh



DG SET
10%
2,858 kWh



TOTAL ENERGY EFFICIENCY
87%
Excellent



TOP ENERGY CONSUMING EQUIPMENT

AC - 01	4,562 kWh	16%
Chiller Plant	3,856 kWh	14%
Production Line - 1	3,452 kWh	12%
Compressor - 1	2,985 kWh	10%
Lighting System	2,564 kWh	9%

ACTIVE ALERTS

View All

 **02** Critical

 **05** Warning

 **03** Info

ENERGY SAVINGS

\$ 2,456 kWh
This Month

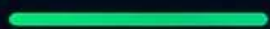
↑ 15.6% vs Last Month

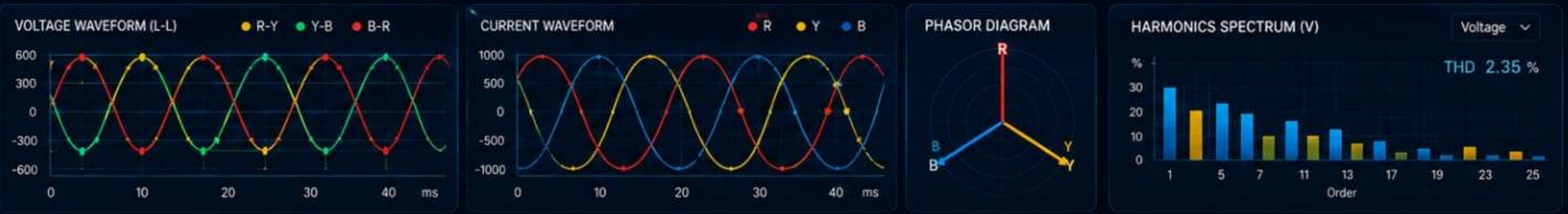


MONTHLY TARGET

85% Achieved

↑ 7% vs Last Month





FEEDER WISE REAL TIME DATA

FEEDER NAME	STATUS	V (L-L)	I (A)	kW	kVAR	kVA	PF	FREQ (Hz)	THD V (%)	THD I (%)
MCC-1: PRODUCTION	ON	415.0	285.6	1,280	620	1,420	0.90	49.98	2.20	2.85
MCC-2: UTILITIES	ON	414.8	152.0	820	320	880	0.93	49.99	2.15	2.60
MCC-3: HVAC	ON	415.1	96.3	540	210	580	0.93	50.01	2.40	2.90
MCC-4: LIGHTING	ON	414.9	45.2	180	60	190	0.95	50.00	1.80	2.10
DG INCOMER	ON	414.7	210.5	750	400	850	0.88	49.97	2.30	2.70

ENERGY METER SUMMARY

DESCRIPTION	IMPORT (kWh)	EXPORT (kWh)	NET (kWh)
TODAY	28,563	3,250	25,313
YESTERDAY	25,340	2,850	22,490
THIS MONTH	6,85,420	72,350	6,13,070
LAST MONTH	5,98,210	68,420	5,29,790

SYSTEM HEALTH

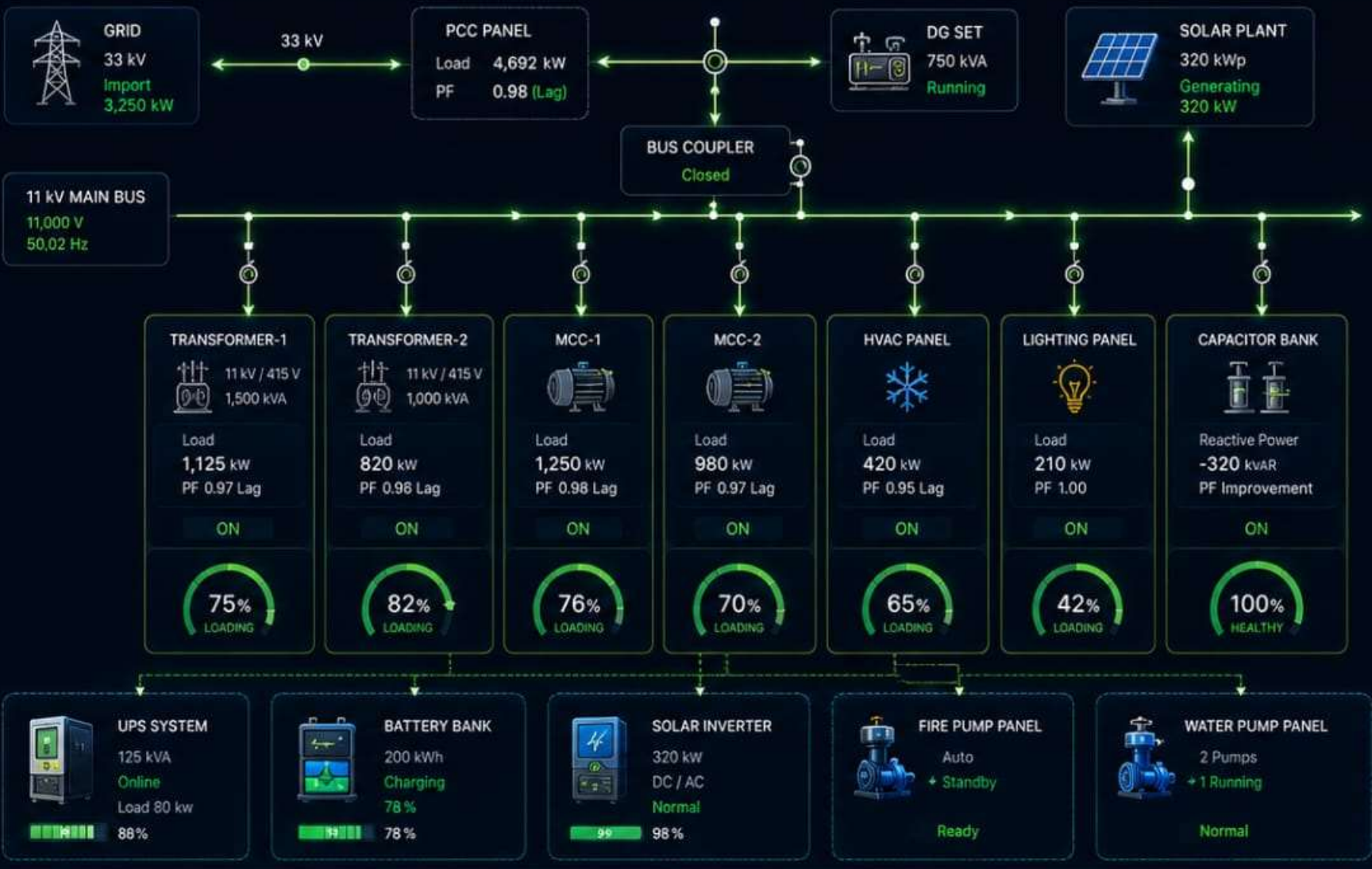


All Systems
HEALTHY

Communication
100 %

3INTERACTIVE SINGLE LINE DIAGRAM (SLD)

Live Power Flow



POWER FLOW SUMMARY

Total Generation	4,762 kW
Total Import	3,250 kW
Total Export	280 kW
Total Consumption	4,692 kW
Losses	68 kW



ASSET STATUS

DG Set	Running
Solar Plant	Generating
UPS System	Online
Battery Bank	Charging (78%)
Transformer-1	Normal
Transformer-2	Normal

LEGEND

 Power Flow	 Transformer
 No Power	 Generator
 Bus	 Solar
 CB Closed	 Motor Load
 CB Open	 Capacitor

 TOTAL MACHINES

24 Machines

 RUNNING MACHINES

18 (75%)

 IDLE MACHINES

4 (17%)

 STOPPED MACHINES

2 (8%)

 TOTAL ENERGY TODAY

28,563 kWh

 TOTAL PRODUCTION

1,25,680 Pcs

 AVG ENERGY PER UNIT

0.23 kWh/Pcs

 TOTAL COST TODAY

₹ 4,32,500

MACHINE LIST

All Machines

Search Machine

 CNC MACHINE - 01

18.62 kW

Energy Today

Running

 AIR COMPRESSOR - 01

12.56 kW

Energy Today

Running

 CHILLER - 01

08.45 kW

Energy Today

Running

 PRODUCTION LINE - 1

22.35 kW

Energy Today

Running

 PUMP - 01

02.10 kW

Energy Today

Idle

 CONVEYOR - 01

00.00 kW

Energy Today

Stopped

 PACKING MACHINE - 01

05.35 kW

Energy Today

Running

Running

Idle

Stopped

Total

18

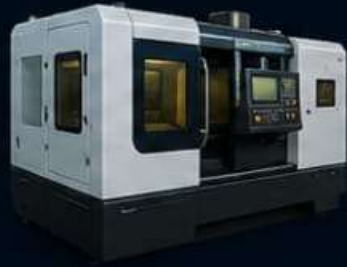
4

2

24

CNC MACHINE - 01

Running



POWER NOW

18.62 kW

ENERGY TODAY

125.6 kWh

RUNNING HOURS

08:45:12

IDLE HOURS

01:15:40

ENERGY PER PART

0.32 kWh/Pcs

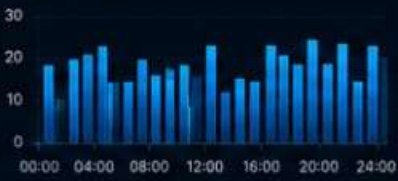
Target 0.35 kWh/Pcs

EFFICIENCY

88%

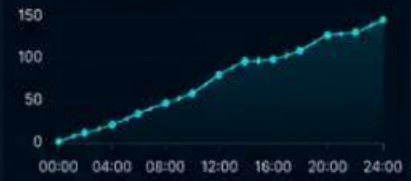
Excellent

POWER (kW)



Min : 8.20 kW Avg : 16.45 kW Max : 24.80 kW

ENERGY (kWh)



Total : 125.6 kWh

PRODUCTION

TODAY 1,250 Pcs

TARGET 1,500 Pcs

83% Achieved

MACHINE PERFORMANCE OVERVIEW

MACHINE NAME	STATUS	POWER NOW (kW)	ENERGY TODAY (kWh)	RUNNING HOURS	IDLE HOURS	PRODUCTION (Pcs)	ENERGY PER PART (kWh/Pcs)	EFFICIENCY (%)	OEE (%)	ALERTS
CNC MACHINE - 01	Running	18.62	125.6	08:45:12	01:15:40	1,250	0.32	88%	82%	2
AIR COMPRESSOR - 01	Running	12.56	88.4	08:10:30	01:50:22	-	-	92%	-	1
CHILLER - 01	Running	08.45	65.2	09:05:11	00:55:41	-	-	90%	-	0
PRODUCTION LINE - 1	Running	22.35	185.6	09:10:20	00:50:15	2,850	0.26	85%	78%	1
PUMP - 01	Idle	02.10	12.5	02:15:30	07:45:00	-	-	60%	-	0
CONVEYOR - 01	Stopped	00.00	00.0	00:00:00	10:30:45	-	-	0%	-	0

ENERGY CONSUMPTION TREND

1H

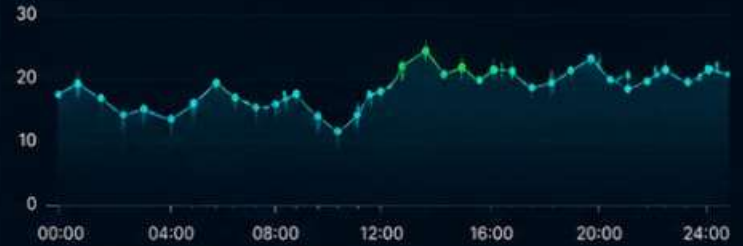
6H

12H

1D

7D

30D



Avg Power : 16.45 kW

Max Power : 24.80 kW

MACHINE STATUS

Spindle	ON
Coolant Pump	ON
Hydraulic System	ON
Door Interlock	Closed
Alarm Status	Normal

ALERTS & EVENTS

10:21 AM	Coolant Level Low
09:48 AM	High Vibration
08:15 AM	Maintenance Due in 5 Days
07:05 AM	Power On

5

PRODUCTION vs ENERGY ANALYTICS

Analyze Efficiency & Performance

PLANT

Ladder Logix Plant 01

DATE

09 Jul 2026

TIME

10:30:45 AM

24°C
Partly Cloudy





TOTAL PRODUCTION

1,25,680 Pcs

↑ 12.5% vs Yesterday



TOTAL ENERGY

28,563 kWh

↑ 8.4% vs Yesterday



ENERGY PER UNIT

0.23 kWh/Pcs

↓ 3.6% vs Yesterday



OVERALL EFFICIENCY

82%

₹ 1,85,000

↑ 15.8% vs Yesterday



CO₂ SAVED

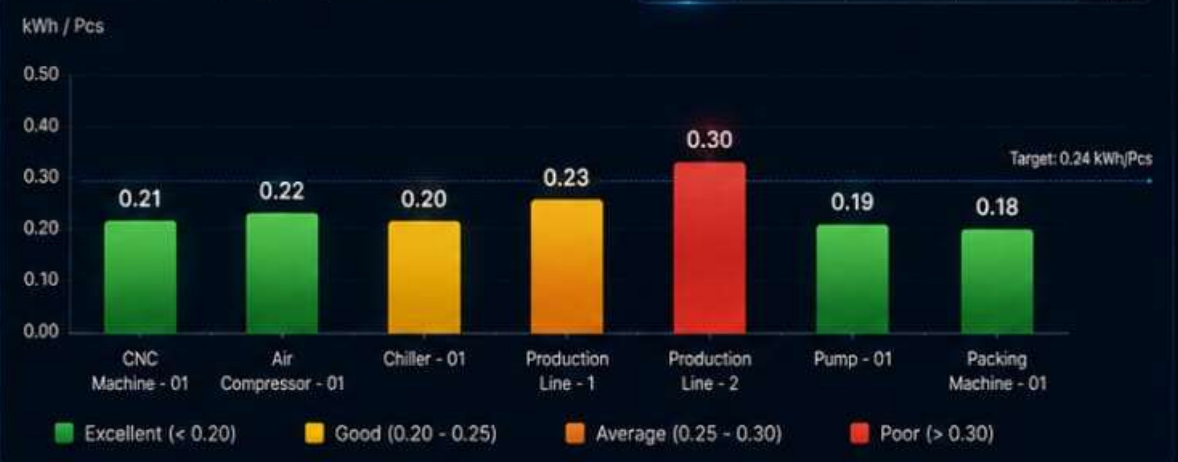
215 kg

↑ 10.3% vs Yesterday

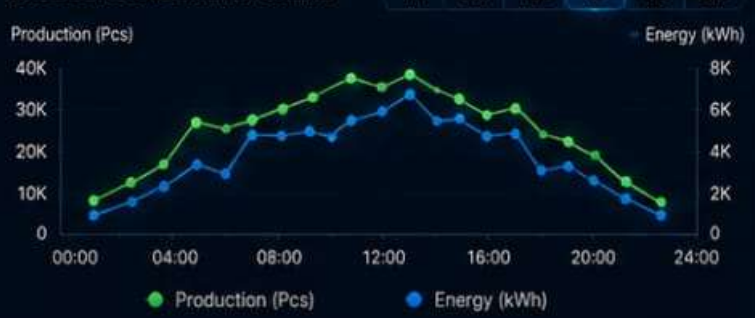
MACHINE-WISE PRODUCTION vs ENERGY

Machine Name	Status	Production (Pcs)	Energy (kWh)	Energy per Unit (kWh/Pcs)	Efficiency (%)	Trend (kWh)
CNC MACHINE - 01	Running	18,450	3,920	0.21	89%	
AIR COMPRESSOR - 01	Running	-	4,120	-	78%	
CHILLER - 01	Running	-	2,850	-	81%	
PRODUCTION LINE - 1	Running	32,560	7,450	0.23	86%	
PRODUCTION LINE - 2	Running	28,750	8,640	0.30	72%	
PUMP - 01	Running	-	1,250	-	85%	
CONVEYOR - 01	Idle	-	680	-	60%	
PACKING MACHINE - 01	Running	12,920	2,350	0.18	92%	
TOTAL / AVERAGE		92,680	31,260	0.23	82%	

ENERGY PER UNIT (kWh/Pcs) COMPARISON



PRODUCTION vs ENERGY TREND



SHIFT PERFORMANCE COMPARISON

Shift	Production (Pcs)	Energy (kWh)	Energy per Unit (kWh/Pcs)	Efficiency (%)	Trend
Shift A (06:00 - 14:00)	48,250	11,250	0.23	83%	
Shift B (14:00 - 22:00)	46,120	11,850	0.26	79%	
Shift C (22:00 - 06:00)	31,310	6,780	0.22	85%	
TOTAL	1,25,680	28,563	0.23	82%	

AI INSIGHTS & RECOMMENDATIONS

-  Production Line - 2 consumes 30% more energy per unit. Potential savings: ₹ 78,500 / Month [Optimize](#)
-  Air Compressor running during idle hours. Potential savings: ₹ 32,000 / Month [View](#)
-  CNC Machine - 01 is performing efficiently. Efficiency better than target.
-  Overall energy efficiency improved by 8.4%. Great job! Keep it up.



TARGET ENERGY PER UNIT

0.24 kWh/Pcs



ACTUAL ENERGY PER UNIT

0.23 kWh/Pcs



DEVIATION

↓ 4.17% Better



MONTHLY POTENTIAL SAVINGS

₹ 1,85,000



CO₂ SAVINGS (MONTHLY)

6.45 Ton



ENERGY SCORE

87 /100

6

UTILITY & MACHINE MONITORING

Monitor All Utilities and Machines in Real Time

UTILITY MONITORING

Live Overview of All Utilities

View:



Today

ELECTRICITY

Consumption

28,563 kWh

Cost

₹ 4,32,500



↑ 8.4% vs Yesterday

● Normal

WATER

Consumption

152 KL

Cost

₹ 15,200



↑ 3.6% vs Yesterday

● Normal

COMPRESSED AIR

Consumption

4,250 Nm³

Cost

₹ 22,150



↑ 6.2% vs Yesterday

● Normal

STEAM

Consumption

3,850 Kg

Cost

₹ 18,950



↑ 2.1% vs Yesterday

● Normal

NATURAL GAS

Consumption

2,250 SCM

Cost

₹ 13,450



↑ 5.7% vs Yesterday

● Normal

DIESEL

Consumption

1,350 Ltr

Cost

₹ 11,250



↑ 1.8% vs Yesterday

● Normal

CHILLED WATER

Consumption

1,125 TRh

Cost

₹ 9,850



↑ 4.3% vs Yesterday

● Normal

LPG

Consumption

720 Kg

Cost

₹ 6,250



↓ 2.4% vs Yesterday

● Normal

UTILITY FLOW OVERVIEW



ELECTRICITY → COMPRESSOR → AIR RECEIVER → DRYER → DISTRIBUTION



WATER SUPPLY → WTP → STORAGE TANK → PLANT USAGE



BOILER → STEAM HEADER → PLANT USAGE

MACHINE MONITORING

Live Status of All Machines

Total Machines

Running 18

4 (17%)

Stopped 2

MACHINE NAME	STATUS	POWER (kW)	ENERGY TODAY (kWh)	RUNNING HOURS	EFFICIENCY (%)	ENERGY PER UNIT	ALERTS
CNC MACHINE - 01	Running	18.62	125.6	08:45:12	88%	0.21 kWh/Pcs	—
AIR COMPRESSOR - 01	Running	12.56	88.4	08:10:30	78%	—	—
CHILLER - 01	Running	8.45	65.2	09:05:11	81%	—	—
PRODUCTION LINE - 1	Running	22.35	185.6	09:10:20	86%	0.23 kWh/Pcs	⚠
PUMP - 01	Idle	2.10	12.5	02:15:30	60%	—	—
CONVEYOR - 01	Stopped	0.00	0.0	00:00:00	0%	—	⚠
PACKING MACHINE - 01	Running	9.25	52.6	07:35:20	85%	0.18 kWh/Pcs	—
HYDRAULIC PRESS - 01	Running	11.45	95.3	08:30:40	82%	0.24 kWh/Pcs	—

UTILITY CONSUMPTION BREAKDOWN



TOTAL COST

₹ 5,30,650

Today

● Electricity

81.5%

● Steam

7.3%

● Compressed Air

4.2%

● Water

2.9%

● Others

4.1%

MACHINE STATUS SUMMARY



24
Total

● Running

18 (75%)

● Idle

4 (17%)

● Stopped

2 (8%)

TOP ENERGY CONSUMING MACHINES

1	Production Line - 1	185.6 kWh
2	CNC Machine - 01	125.6 kWh
3	Air Compressor - 01	88.4 kWh
4	Hydraulic Press - 01	95.3 kWh
5	Chiller - 01	65.2 kWh

TOTAL UTILITY COST (Today)

₹ 5,30,650

↑ 9.2% vs Yesterday

TOTAL ENERGY TODAY

28,563 kWh

↑ 8.4% vs Yesterday

TOTAL PRODUCTION

1,25,680 Pcs

↑ 12.5% vs Yesterday

ENERGY PER UNIT

0.23 kWh/Pcs

↑ 3.6% vs Yesterday

TOTAL CO₂ EMISSION

215 kg

↑ 10.3% vs Yesterday

POTENTIAL SAVINGS

₹ 1,85,000 / Month

AI Based Recommendation

7

SOLAR ENERGY DASHBOARD

Real Time Solar Monitoring & Performance

PLANT

Ladder Logix Plant 01

DATE

09 Jul 2026

TIME

10:30:45 AM

24°C

Partly Cloudy







Last Updated : 10:30:45 AM LIVE



SOLAR GENERATION

320.5 kW

Today

↑ 12.6% vs Yesterday



GRID IMPORT

156.3 kW

Today

↓ 18.7% vs Yesterday



GRID EXPORT

164.2 kW

Today

↑ 21.4% vs Yesterday



SOLAR UTILIZATION

78%

Today

↑ 8.3% vs Yesterday



ENERGY SAVINGS

₹ 18,650

Today

↑ 15.2% vs Yesterday



CO₂ SAVED

215 kg

Today

↑ 10.8% vs Yesterday

SOLAR SYSTEM OVERVIEW



SOLAR PLANT

500 kWp



INVERTER

320.5 kW



PLANT LOAD

476.8 kW



BATTERY

SOC 78%

Charging

88.4 kW



GRID IMPORT

156.3 kW



GRID EXPORT

164.2 kW

WEATHER CONDITIONS

24°C

Partly Cloudy



Irradiance

712 W/m²



Humidity

62 %



Wind Speed

12 km/h



Ambient Temp.

24 °C

ENVIRONMENTAL IMPACT

CO₂ SAVED TODAY

215 kg

CO₂ SAVED THIS MONTH

6,450 kg

EQUIVALENT TREES PLANTED

23.6 Trees

FINANCIAL SAVINGS

TODAY'S SAVINGS

₹ 18,650

THIS MONTH'S SAVINGS

₹ 5,48,650

THIS YEAR'S SAVINGS

₹ 38,75,200



SOLAR GENERATION TREND

Today 7D 30D 12M



320.5 kW
10:30 AM

Solar Generation (kW)

ENERGY FLOW TODAY

Today 7D 30D 12M

TOTAL ENERGY

640.9 kWh

Solar Used

476.8 kWh (74.4%)

Grid Import

156.3 kWh (24.4%)

Grid Export

164.2 kWh (25.6%)

To Battery

88.4 kWh (13.8%)

78%

Performance Ratio

YIELD TODAY

3.85 kWh/kWp

SPECIFIC YIELD

1,404 kWh/kWp

PEAK POWER TODAY

412.6 kW

09:45 AM

DAILY GENERATION

3,850 kWh

MONTHLY GENERATION

1,25,630 kWh

LIFETIME GENERATION

12.58 MWh

TARGET ACHIEVEMENT

112% vs Target

PLANT CAPACITY

500 kWp

COMMISSIONED ON

12 Feb 2024

Harnessing Clean Energy • Powering a Sustainable Future

8

POWER QUALITY DASHBOARD

Monitor Power Quality Parameters in Real Time

PLANT

Ladder Logix Plant 01

DATE

09 Jul 2026

TIME

10:30:45 AM

 24°C
Partly Cloudy









POWER QUALITY SCORE

92 /100

Good



VOLTAGE THD (Avg)

2.45 %

Good



CURRENT THD (Avg)

6.18 %

Good



POWER FACTOR (Avg)

0.97 Lag

Good



FREQUENCY (Avg)

50.01 Hz

Normal



UNBALANCE (V)

1.45 %

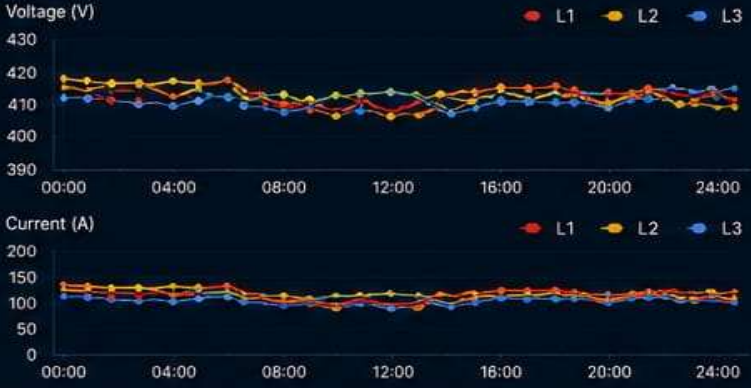
Good

REAL TIME PARAMETERS

Parameter	L1	L2	L3	Average	Status
Voltage (V)	415.5	414.7	416.2	415.5	Good
Current (A)	128.6	125.3	131.2	128.4	Good
Frequency (Hz)	50.00	50.01	50.02	50.01	Normal
Power Factor	0.97	0.96	0.97	0.97 Lag	Good
Active Power (kW)	68.2	65.1	71.4	68.2	Good
Apparent Power (kVA)	70.4	67.9	74.0	70.8	Good
Reactive Power (kVar)	18.1	17.8	19.0	18.3	Good

VOLTAGE & CURRENT TRENDS

1H 6H 12H 1D 7D 30D



POWER QUALITY EVENTS (Today)

Time	Event	Severity	Duration
10:15:32 AM	Voltage Sag	Medium	0.85 s
09:47:11 AM	Voltage Swell	Medium	0.60 s
09:22:08 AM	Harmonic Distortion High	High	-
08:33:45 AM	Current Unbalance	Medium	-
07:58:21 AM	Voltage Flicker	Low	-

 High
1

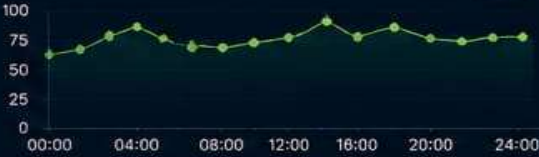
 Medium
3

 Low
1

 Total
5

POWER QUALITY SCORE TREND

1D 7D 30D



92 /100
Good

ALERTS & NOTIFICATIONS

 10:15 AM

Voltage Sag detected on L2 phase

[View](#)

 09:22 AM

High Harmonic Distortion (THD > 10%)

[View](#)

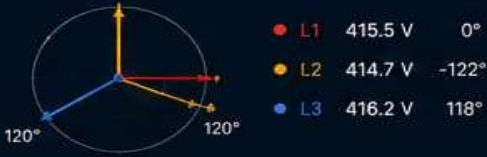
 08:33 AM

Current Unbalance above 1%

[View](#)

[View All Alerts](#)

VOLTAGE PHASOR DIAGRAM



CURRENT PHASOR DIAGRAM



POWER FACTOR

L1

0.97 Lag

L2

0.96 Lag

L3

0.97 Lag

Average PF: 0.97 Lag

RECOMMENDATIONS

 Power Quality parameters are within acceptable limits.

 Continue monitoring harmonic levels.

 Ensure proper load balancing across phases.

 Maintain equipment for optimal power quality.

 High Accuracy Monitoring

 IEEE 519 Compliance

 Real Time Alarms

 Reports & Analysis

 Improve Efficiency

9

MAXIMUM DEMAND DASHBOARD

Monitor & Control Maximum Demand in Real Time

PLANT

Ladder Logix Plant 01

DATE

09 Jul 2026

TIME

10:30:45 AM

 24°C

Partly Cloudy

 5







CURRENT DEMAND

1,245 kW

50.2% of Contract Demand



MAXIMUM DEMAND (MD)

2,480 kW

Achieved on 08 Jul 2026 06:15 PM



CONTRACT DEMAND (CD)

2,500 kW



DEMAND LEFT

1,255 kW

49.8% Remaining



MD CHARGES (MTD)

₹ 1,86,450

Till 09 Jul 2026



PREDICTED MD (EOD)

2,310 kW

within Limit

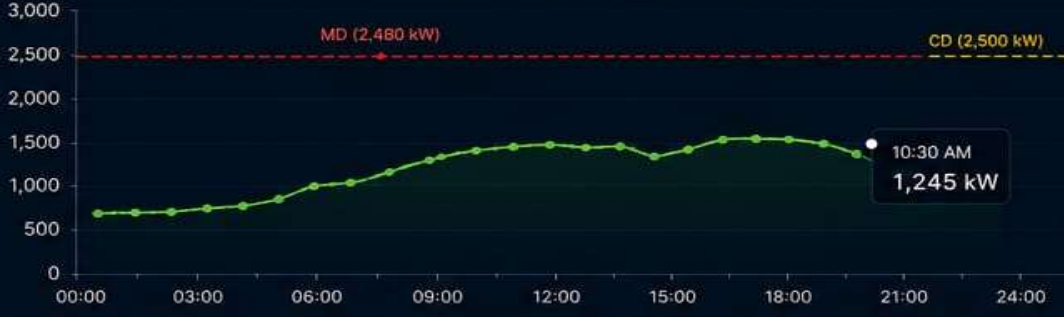
TODAY'S DEMAND PROFILE

15 Min1 Hour1 Day7 Days30 Days

● Actual Demand (kW)

— Contract Demand (kW)

— Maximum Demand (kW)



10:30 AM
1,245 kW

MIN DEMAND

620 kW

02:30 AM

AVG DEMAND

1,186 kW

Today

MAX DEMAND

2,480 kW

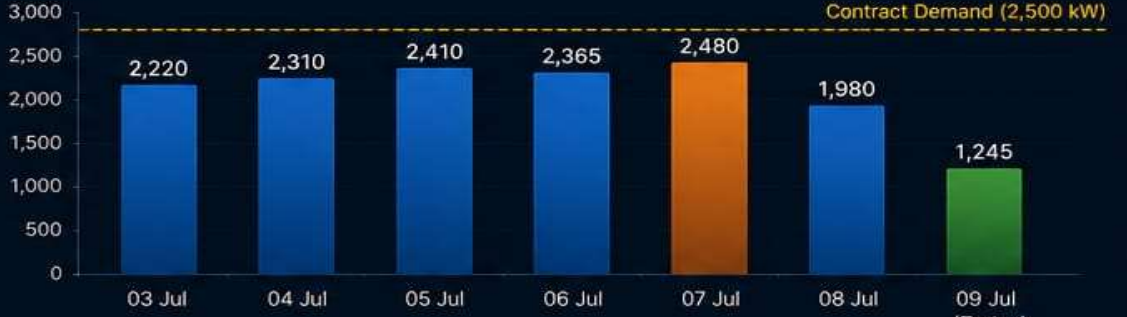
06:15 PM

PEAK TIME

06:00 PM – 07:00 PM

MAXIMUM DEMAND TREND

7 Days30 Days12 Months



Contract Demand (2,500 kW)

Maximum Demand (kW)

Date	MD (kW)
03 Jul	2,220
04 Jul	2,310
05 Jul	2,410
06 Jul	2,365
07 Jul	2,480
08 Jul	1,980
09 Jul (Today)	1,245

MD UTILIZATION (TODAY)



50.2%
Utilized

 Contract Demand (CD)

2,500 kW

 Current Demand

1,245 kW

 Demand Left

1,255 kW

 Utilization

50.2 %

Status

 Within Limit

DAILY MAXIMUM DEMAND SUMMARY

Date	MD (kW)	Time	% of CD	Status
09 Jul 2026 (Today)	1,245	10:30 AM	50.2%	Within Limit
08 Jul 2026	1,980	06:45 PM	79.2%	Within Limit
07 Jul 2026	2,480	06:15 PM	99.2%	Near Limit
06 Jul 2026	2,365	07:00 PM	94.6%	Near Limit
05 Jul 2026	2,410	06:30 PM	96.4%	Near Limit
04 Jul 2026	2,310	06:00 PM	92.4%	Within Limit
03 Jul 2026	2,220	07:15 PM	88.8%	Within Limit

MD FORECAST (TODAY)



2,310 kW
Predicted MD (EOD)

Predicted MD is within Contract Demand Limit

Expected MD Charges: ₹ 1,84,000

MD ALERTS & NOTIFICATIONS

 07 Jul 2026 06:15 PM

Maximum Demand reached 2,480 kW (99.2% of CD)

View

 08 Jul 2026 09:00 AM

Demand is within the safe limit.

View

 09 Jul 2026 10:30 AM

Current demand is 1,245 kW (50.2% of CD)

View

MD CONTROL ACTIONS

 Enable Demand Control

ON

 High Demand Alarm

ON

 Load Shedding Stage

Stage 1 (Auto)

 MD Reset Time

00:00 Hrs

TIPS TO MANAGE MD

 Schedule heavy loads during off-peak hours.

 Avoid simultaneous starting of large machines.

 Regularly monitor demand trend and forecasts.

 Use load shedding logic to prevent MD penalty.



10

ALARM & NOTIFICATION CENTER

Real Time Alerts, Notifications & Incident Management

PLANT

Ladder Logix Plant 01

DATE

09 Jul 2026

TIME

10:30:45 AM

24°C
Partly Cloudy

12

5





TOTAL ACTIVE ALARMS

12

Critical 2 | Major 5 | Minor 5



UNACKNOWLEDGED

7

Critical 1 | Major 3 | Minor 3



ALARMS TODAY

28

Critical 4 | Major 11 | Minor 13



ALARM CLEAR TODAY

16

Acknowledged 14 | Auto Cleared 2

View:  

All Alarms 

Acknowledge All

MTTA (Avg)

00:04:32

Minutes

MTTR (Avg)

00:18:45

Minutes

REAL TIME ALARM LIST

Time	Severity	Alarm / Event	Source / Location	Parameter	Value	Status	Ack By
10:28:34 AM	 Critical	Transformer Overload	Main Transformer - 01	Load (kVA)	1,850 / 1,800	Unacknowledged	-
10:26:11 AM	 Major	Chiller High Temperature	Chiller - 01	Temperature (°C)	12.5 / 10.0	Unacknowledged	-
10:25:02 AM	 Major	Power Factor Low	Main Incomer	PF	0.72 / 0.95	Unacknowledged	-
10:23:47 AM	 Minor	Air Compressor High Pressure	Air Compressor - 01	Pressure (bar)	9.2 / 8.0	Acknowledged	Rakesh S.
10:21:30 AM	 Minor	Voltage Unbalance	PCC Incomer	Unbalance (%)	2.1 / 2.0	Acknowledged	Rakesh S.
10:18:15 AM	 Major	Solar Inverter Fault	Solar Plant - 01	Status	Fault	Unacknowledged	-
10:15:44 AM	 Minor	Water Flow Low	WTP - 01	Flow (m³/hr)	18.5 / 20.0	Acknowledged	Mehul P.
10:12:09 AM	 Info	DG Set Auto Start	DG Set - 02	Status	Started	Auto Cleared	System
10:08:55 AM	 Minor	Lighting Circuit Trip	Panel - LP-2	Status	Tripped	Acknowledged	Jay P.
10:05:31 AM	 Info	Energy Meter Comm. Restored	Energy Meter - 05	Status	Online	Auto Cleared	System

Showing 1 to 10 of 12 alarms

ALARM DISTRIBUTION (By Severity)



ALARM BY SYSTEM



ALARM TREND (Last 7 Days)



ALARM DETAILS

Transformer Overload

Acknowledge

Add Note

Escalate

Source / Location

Main Transformer - 01

Parameter

Load (kVA)

Value

1,850 / 1,800 kVA

Severity

Critical

Start Time

09 Jul 2026 10:28:34 AM

Duration

00:02:11 (Ongoing)

Description

Transformer load has exceeded the safe limit.

Recommended Action

Reduce load or switch off non-critical equipment.

NOTIFICATION CHANNELS

Email Notifications	Enabled
SMS Notifications	Enabled
Push Notifications	Enabled
WhatsApp Notifications	Enabled
Voice Call (Critical Only)	Enabled

Last Notification Sent: 10:28:35 AM (Email, SMS, Push)

RECENT NOTIFICATIONS

View All

	10:28 AM	Transformer Overload at Main Transformer - 01	Critical
	10:26 AM	Chiller High Temperature at Chiller - 01	Major
	10:25 AM	Power Factor Low at Main Incomer	Major
	10:23 AM	Air Compressor High Pressure at Air Compressor - 01	Minor
	10:12 AM	DG Set Auto Start at DG Set - 02	Info

ALARM ACKNOWLEDGMENT SUMMARY (Today)

		
14	2	2
Acknowledged	Auto Cleared	Escalated

TOP ALARM SOURCES (Today)

1. Main Transformer - 01	4
2. Chiller - 01	3
3. Main Incomer	3

ESCALATED ALARMS

Active Escalations

2

View Escalations

SLA COMPLIANCE (MTTR Based)



92% Compliant

Within SLA 22

Breached 2

In Progress 4

QUICK ACTIONS

Create Maintenance Ticket

Report an Issue

Configure Alarm Rules

TOTAL ENERGY COST (Today)

 ₹ 5,30,650

+ 8.6% vs Yesterday

TOTAL ENERGY COST (MTD)

 ₹ 18,65,420

+ 9.2% vs Last Month

TOTAL ENERGY COST (YTD)

 ₹ 1,86,54,200

+ 11.7% vs Last Year

AVERAGE UNIT COST

 ₹ 8.45 / kWh

+ 3.4% vs Yesterday

COST PER UNIT PRODUCTION

 ₹ 1.48 / Pcs

+ 6.5% vs Yesterday

Cost View: INR (₹)

 FORECASTED COST (MTD)

₹ 20,25,000

(Expected)



TARIFF & BILLING SUMMARY (MTD)

Tariff	Energy (kWh)	Demand (kW)	Energy Charges (₹)	Demand Charges (₹)	Other Charges (₹)	Total Cost (₹)
HT - I A	1,59,850	850	9,12,450	65,250	7,720	9,85,420
HT - IV	88,450	450	4,35,600	72,450	12,600	5,20,650
HT - I B	42,650	250	1,85,250	48,500	11,850	2,45,600
LT - General	18,750	—	62,450	—	16,300	78,750
Others	—	—	25,000	—	10,000	35,000
Total	3,09,700	1,550	16,20,750	1,86,200	58,470	18,65,420

COST INSIGHTS

- Energy cost is 8.6% lower than yesterday.
- Demand charges are 15.8% of total cost.
- Improve power factor to reduce penalties.
- Reduce energy consumption during peak hours.

RECOMMENDED ACTIONS

- Optimize load during peak tariff hours.
- Improve power factor above 0.95.
- Monitor high consumption machines.
- Review demand contract to avoid penalties.

View Detailed Report

BILLING CYCLE

01 Jul 2026 - 31 Jul 2026

NEXT BILLING DATE

01 Aug 2026

BUDGET (MTD)

₹ 20,00,000

BUDGET ACHIEVED

93.3%

SAVINGS (MTD)

₹ 1,34,580 vs Budget

PROJECTED OVERRUN

₹ 1,59,580 (If no action taken)



Ladder
Logix

Smart Energy
Management System

Executive
Dashboard

Real Time
Monitoring

Energy Analytics

Utility & Machine

Solar Energy

Power Quality

Maximum Demand

Alarms & Events

Energy Cost

AI Optimisation

Reports

Cost Analytics

Trend Analysis

Sustainability

Settings

Powered by
Ladder Logix

12

AI ENERGY OPTIMISATION DASHBOARD

Intelligent Insights. Optimised Energy. Maximum Savings.

PLANT

Ladder Logix Plant 01

DATE

09 Jul 2026

TIME

10:30:45 AM

24°C
Partly Cloudy



12







AI OPTIMISED ENERGY SAVINGS (MTD)

₹ 2,18,450

↑ 12.6% vs Last Month



AI OPTIMISED ENERGY (MTD)

1,25,680 kWh

↑ 11.8% vs Last Month



AI RECOMMENDATIONS

36

28 Implemented | 8 Pending



OPTIMISATION ACCURACY

92.4%

↑ 5.3% vs Last Month



PREDICTED SAVINGS (Next 30 Days)

₹ 4,75,000

Based on AI Forecast



CO₂ REDUCTION (MTD)

1.85 Ton

↑ 10.9% vs Last Month

AI INSIGHTS (Today)



✓ AI model detected high energy usage in Compressor-01 between 10 AM – 12 PM.
Saving Opportunity: ₹ 18,500

⚙️ Optimise Chiller-01 setpoint by +1.5°C during low load conditions.
Saving Opportunity: ₹ 11,200

⚠️ Power factor likely to drop below 0.90 tomorrow 4 PM – 6 PM.
Action Suggested: Capacitor control ON

✓ Shift non-critical loads to off-peak hours (11 PM – 6 AM) for lower tariff.
Saving Opportunity: ₹ 6,750

View All Insights >

OPTIMISATION SUMMARY (MTD)

Baseline Energy
1,42,350 kWh

AI Optimised Energy
1,25,680 kWh

Energy Saved
16,670 kWh (11.8%)

Cost Saved
₹ 2,18,450

CO₂ Reduced
1.85 Ton

Energy (kWh)



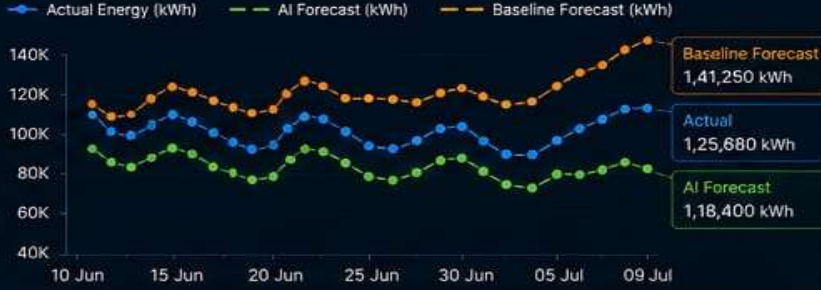
Category	Energy (kWh)
Baseline	1,42,350
AI Optimised	1,25,680

AI ENERGY FORECAST & TREND

Actual Energy (kWh)

AI Forecast (kWh)

Baseline Forecast (kWh)



Category	Value (kWh)
Baseline Forecast	1,41,250
Actual	1,25,680
AI Forecast	1,18,400

AI forecast shows 16.2% lower energy consumption compared to baseline forecast.

OPTIMISATION OPPORTUNITIES (Top 5)

Opportunity	Impact	Potential Saving (MTD)	Priority	Status
Optimise Compressor-01 Load	High	₹ 18,500	High	Implemented
Chiller-01 Setpoint Optimisation	High	₹ 11,200	High	Implemented
Shift Non-Critical Loads (Off-Peak)	Medium	₹ 6,750	Medium	Pending
Improve Power Factor Automation	Medium	₹ 5,950	Medium	Implemented
Lighting Control Based on Occupancy	Low	₹ 3,200	Low	Pending

View All Opportunities >

AI RECOMMENDATIONS STATUS

36
Total

Implemented 28 (77.8%)

Pending 8 (22.2%)

Dismissed 0 (0%)

Top Recommendation Categories

HVAC 12

Process 9

Electrical 8

Utilities 5

Others 2

EQUIPMENT OPTIMISATION (Real Time)

View All Equipment

Equipment	AI Status	Optimisation Action	Energy Impact	Health
Compressor-01	Optimised	Load Optimised (72%)	↓ 14.6%	Good
Chiller-01	Optimised	Setpoint +1.5°C	↓ 11.3%	Good
AHU-01	Optimised	VFD Speed Optimised	↓ 8.7%	Good
Pump-02	Monitoring	Flow Rate Optimised	↓ 6.2%	Good
Lighting System	Optimised	Auto Dimming (Daylight)	↓ 9.5%	Good

AI MODEL INFO



Model Type: Hybrid ML (LSTM + XGBoost)

Training Data: 1.2 Million Data Points

Last Training: 08 Jul 2026 11:30 PM

Model Accuracy: 92.4%

Model Status: Running

OPTIMISATION IMPACT (Year to Date)

Energy Saved
1,85,430 kWh

Cost Saved
₹ 15,62,400

CO₂ Reduced
13.25 Ton

Avg. Efficiency Gain
12.9%

MODEL PERFORMANCE (Accuracy Trend)



Date	Accuracy (%)
10 Jun	82.1%
15 Jun	84.7%
20 Jun	87.3%
25 Jun	89.6%
30 Jun	91.2%
05 Jul	92.1%
09 Jul	92.4%

Model Accuracy: 92.4%
Excellent
↑ 5.3% vs Last Month

QUICK ACTIONS

Run AI Optimisation Now

Retrain AI Model

Configure Optimisation Rules

View Optimisation Report

AI Powered Insights

Intelligent Automation

Continuous Optimisation

Lower Energy Cost

Sustainable Future

 TOTAL EQUIPMENT

56

100% Monitored

 HEALTHY

32

57.1%

 AT RISK

15

26.8%

 CRITICAL

9

16.1%

 PREDICTED FAILURES (Next 30 Days)

12

 DOWNTIME AVERTED (MTD)

18.6 Hrs

 COST SAVINGS (MTD)

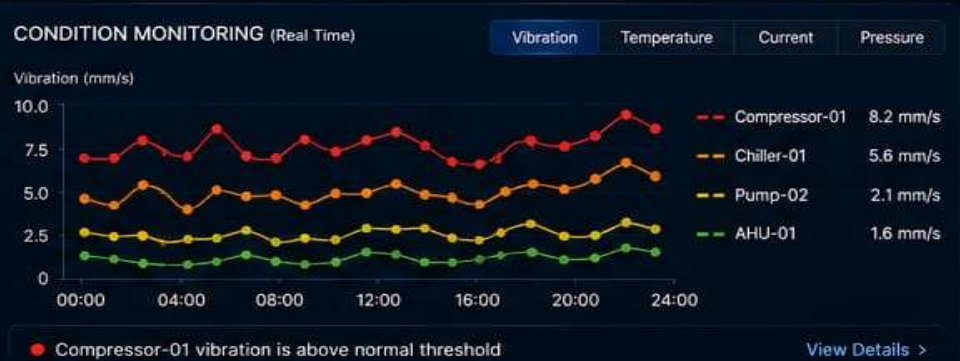
₹ 3,45,200



TOP AT-RISK EQUIPMENT

Equipment	Health Score	Risk Level	Predicted Failure	Days Left
 Compressor-01 Air Compressor	38 /100	Critical	12 Jul 2026	3
 Chiller-01 Water Chiller	45 /100	High	16 Jul 2026	7
 VFD Panel-03 Drive System	52 /100	High	20 Jul 2026	11
 Cooling Tower-01 Cooling Tower	61 /100	Medium	26 Jul 2026	17
 Pump-02 Booster Pump	62 /100	Medium	28 Jul 2026	19

View All Equipment >



PREDICTIVE ALERTS

View All >

	10:26 AM	High Vibration Detected Compressor-01	Critical	3 Days Left
	09:58 AM	Bearing Wear Detected Chiller-01	High	7 Days Left
	09:41 AM	Temperature Deviation VFD Panel-03	High	11 Days Left
	09:15 AM	Pressure Fluctuation Pump-02	Medium	19 Days Left
	08:50 AM	Performance Degradation AHU-01	Info	25 Days Left

View All Alerts >

MAINTENANCE CALENDAR

View Calendar >

10 JUL	Compressor-01 Vibration Analysis & Bearing Check	Planned	High
14 JUL	Chiller-01 Oil Analysis & Filter Replacement	Planned	High
18 JUL	VFD Panel-03 Capacitor & Cooling Fan Check	Planned	Medium
22 JUL	Cooling Tower-01 Belt Inspection & Alignment	Planned	Medium
28 JUL	Pump-02 Seal & Impeller Inspection	Planned	Low

RELIABILITY KPI'S (MTD)

 MTBF

362 Hrs

↑ 12.5%

vs Last Month

 MTTR

2.45 Hrs

↓ 8.1%

vs Last Month

 Availability

96.8%

↑ 4.3%

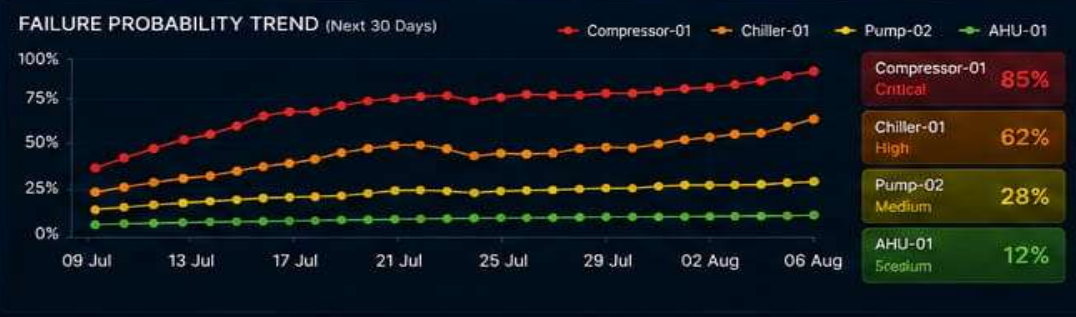
vs Last Month

 Unplanned Downtime

6.2 Hrs

↓ 18.4%

vs Last Month



RECOMMENDED ACTIONS

	Inspect and replace bearing of Compressor-01	Immediate High	Create Work Order
	Check oil quality and level in Chiller-01	High	Create Work Order
	Tighten electrical connections in VFD Panel-03	Medium	Create Work Order
	Clean cooling tower fan blades	Medium	Schedule
	Monitor performance of Pump-02	Low	Monitor

View All Recommendations >

AI INSIGHTS



AI model detected abnormal vibration pattern in Compressor-01 similar to past failure cases.

Recommended action can prevent failure with 92% confidence.

View AI Insights >



TOTAL ENERGY (kWh)

18,65,420

⬆ 9.2% vs Previous Period





TOTAL COST (₹)

18,65,420

⬆ 8.7% vs Previous Period





AVG UNIT COST (₹/kWh)

8.45

⬆ 3.4% vs Previous Period





PEAK DEMAND (kW)

2,480

⬆ 6.1% vs Previous Period





CO₂ EMISSIONS (Ton)

1.85

⬆ 10.6% vs Previous Period



ENERGY CONSUMPTION TREND (kWh)

Daily

Weekly

Monthly

— Current Period

--- Previous Period

--- Daily Average (Current)

ENERGY COST TREND (₹)

Daily

Weekly

Monthly

■ Current Period

--- Previous Period

PEAK DEMAND TREND (kW)

■ Current Period

--- Previous Period

Max Demand (Current)

2,480 kW

on 07 Jul 2026 06:00 PM

Max Demand (Previous)

2,340 kW

on 30 Jun 2026 06:00 PM

Change

⬆ 6.1%

ENERGY SHARE BY CATEGORY (Current Period)



Utility

43.2%

(8,05,850 kWh)

Production

31.8%

(5,93,260 kWh)

HVAC

12.6%

(2,34,800 kWh)

Lighting

7.4%

(1,38,420 kWh)

Others

5.0%

(93,290 kWh)

MONTHLY SUMMARY COMPARISON

Month	Energy (kWh)			Cost (₹)		
	Current	Previous	% Change	Current	Previous	% Change
Jul 2026 (Till 09 Jul)	6,70,250	6,10,430	⬆ 9.8%	5,68,750	5,20,360	⬆ 9.3%
Jun 2026	16,25,800	15,02,450	⬆ 8.2%	13,72,600	12,58,300	⬆ 9.1%
May 2026	15,80,430	14,95,210	⬆ 5.7%	13,45,260	12,23,500	⬆ 10.0%
Apr 2026	15,10,320	14,20,860	⬆ 6.3%	12,81,270	11,52,900	⬆ 11.1%
Mar 2026	14,65,210	13,90,480	⬆ 5.4%	12,30,540	11,22,200	⬆ 9.6%
Feb 2026	13,80,650	13,15,670	⬆ 4.9%	11,60,350	10,35,200	⬆ 12.1%

% Change is calculated against Previous Period

DAY OF WEEK ANALYSIS (Average kWh)

■ Current Period

■ Previous Period

Weekdays have higher consumption. Consider load optimization on peak days.

HOURLY PATTERN (Average kWh)

■ Current Period

--- Previous Period

Peak usage between 09:00 AM - 06:00 PM

INSIGHTS & OBSERVATIONS

⚠ Total energy increased by 9.2% compared to previous period.

⚠ Peak demand increased by 6.1%.

✅ Unit cost reduced by 3.4% – Good control!

✅ Higher consumption on weekdays (Mon–Fri).

✅ Review weekend and night time load optimization opportunities.

View Detailed Report

 TOTAL ENERGY (Current Period)
18,65,420 kWh

 TOTAL ENERGY (Previous Period)
17,06,280 kWh

 TOTAL COST (Current Period)
₹ 18,65,420

 TOTAL COST (Previous Period)
₹ 17,16,260

OVERALL CHANGE

⬆ 9.2%

15

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Measure. Monitor. Manage. Make a Sustainable Impact.

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All key insights in your pocket



EXECUTIVE DASHBOARD

Strategic view for smarter decisions

09 Jul 2026

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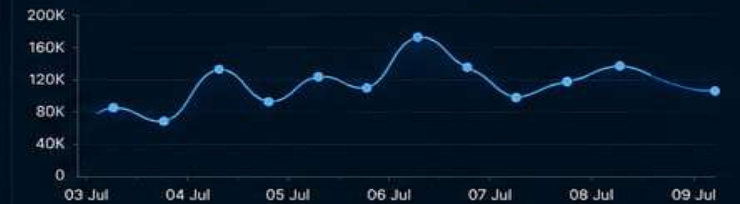
ENERGY CONSUMPTION OVERVIEW (kWh)

Today 7D 30D MTD



ENERGY COST TREND (₹)

Today 7D 30D MTD



PLANT PERFORMANCE (Today)

Plant	Status	Energy (kWh)	Cost (₹)	Unit Cost (₹/kWh)	vs Yesterday
Plant 01 - Delhi	Online	3,25,450	3,12,450	9.60	↑ 8.6%
Plant 02 - Ahmedabad	Online	2,95,620	2,78,450	9.42	↑ 7.9%
Plant 03 - Mumbai	Online	3,45,780	3,21,850	9.32	↑ 10.4%
Plant 04 - Bengaluru	Online	2,85,450	2,65,780	9.32	↑ 6.1%
Plant 05 - Hyderabad	Online	3,05,820	2,88,850	9.44	↑ 9.3%
Plant 06 - Kolkata	Online	2,07,300	1,98,240	9.57	↑ 8.3%
TOTAL		18,65,420	18,65,420	8.45	↑ 9.2%

ENERGY SHARE BY SOURCE (MTD)



CARBON FOOTPRINT (MTD)



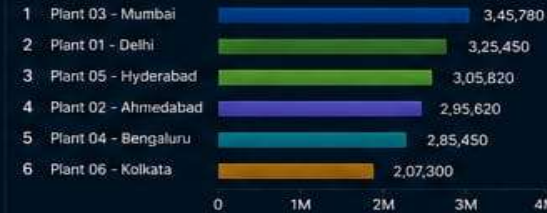
ALERTS & NOTIFICATIONS

View All

- High Energy Consumption Plant 03 - Mumbai 10:20 AM
- Power Factor Low Plant 05 - Hyderabad 09:15 AM
- Equipment Maintenance Due Plant 04 - Bengaluru 08:40 AM

TOP ENERGY CONSUMING PLANTS (MTD)

By Energy (kWh)



SAVINGS SUMMARY (MTD)



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