



**THE  LIMITED** CEMENT UNIT-II, RAMAKRISHNAPURAM  
24th National Award

“Excellence in Energy Management 2023”  
13<sup>th</sup> – 15<sup>th</sup> September 2023

**LEADER**  
**V.MADHUSUDANA RAO**  
**PLANT HEAD**

**Team Members**  
**A.V.R.G.BHAVANARAYANA-DGM(QC)**  
**R.VARAPRASADA RAO- DGM(E&I)**  
**B. YOGESWAR-AGM(PROCESS)**

# About "The KCP Limited"

*"Celebrating 82 years of success"*



**1941**

*"Journey started with setting up of 800TCD sugar plant at Vuyyuru, Krishna Dist. Andhra Pradesh by Sri. V. Ramakrishan Founder of KCP"*

**1958**

*"India's first dry process cement plant was installed at Macherla by Humboldt AG, Germany"*

**1999**

*"Hydel Power Division setup at Nekkarikallu, Andhra Pradesh on the Guntur Canal of Krishna river to generate 8 MW of power"*

**2006**

*"Wind Power generating Unit setup at Uthumalai village in Tirunelveli District of Tamil Nadu"*

**2011**

*"Cement Plant II line # 1 Commissioned at Ramakrishnapuram, Muktyala, Andhra Pradesh, Line # 2 commissioned in 2018 at the same location"*

**2013**

*"Commissioning of 1.15 MW Solar at Muktyala Cement Plant, Ramakrishnapuram, Muktyala, Andhra Pradesh"*

**2014**

*"Commissioning of 18MW Thermal Power Plant at Muktyala Cement Plant, Ramakrishnapuram, Muktyala, Andhra Pradesh"*

**2019**

*"Cement Plant II line # 2 Commissioned at Ramakrishnapuram, Muktyala, Andhra Pradesh,"*

**2022**

*"Packing Terminal Unit " set up at Arakkonam, in Tamilnadu"*



**"Legacy Continues"**

# GROUP COMPANIES OF KCP



THE K C P LIMITED, CEMENT  
UNIT-I MACHERLA – 0.8 MTPA



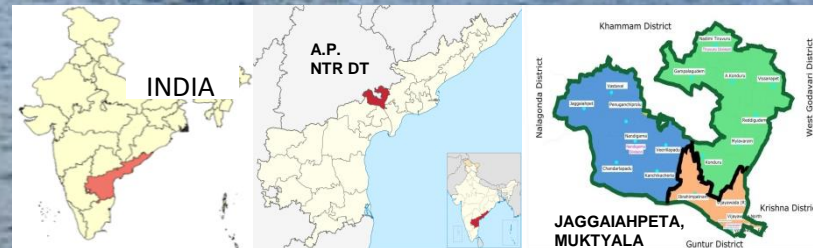
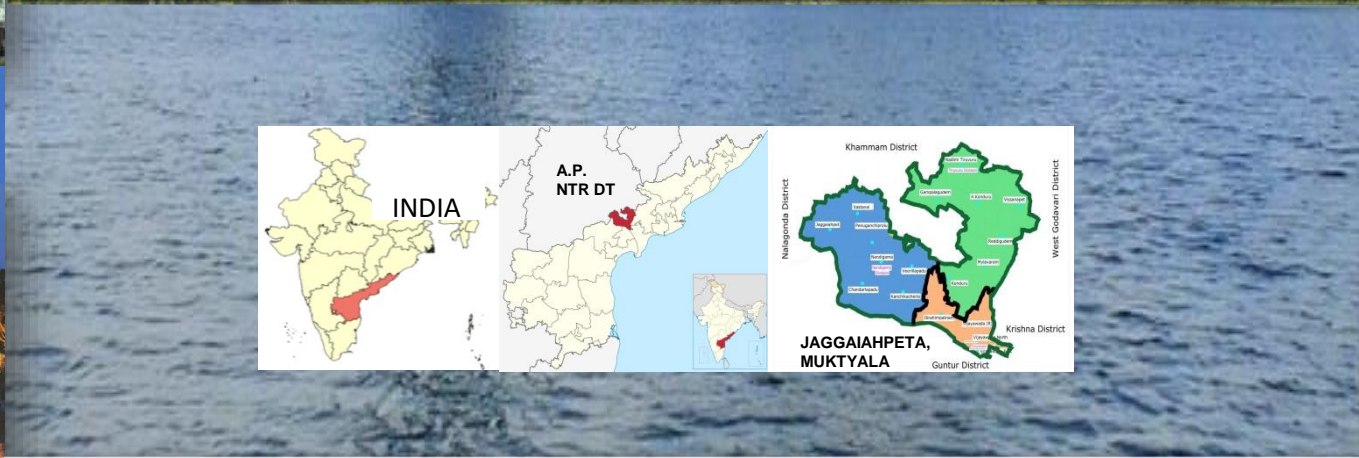
HEAVY ENGINEERING,  
THIRUVOTTIYUR

*HYDEL POWER PLANT*



HYDEL POWER PLANT,  
NEKARIKALLU – 8.25 MW

We are  
from this  
Plant



THE K C P LIMITED, CEMENT UNIT-II  
MUKTYALA – 3.52 MTPA



SUGAR PLANT,  
VIETNAM – 6000 TPD



PACKING TERMINAL  
ARAKKONAM



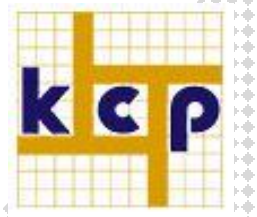
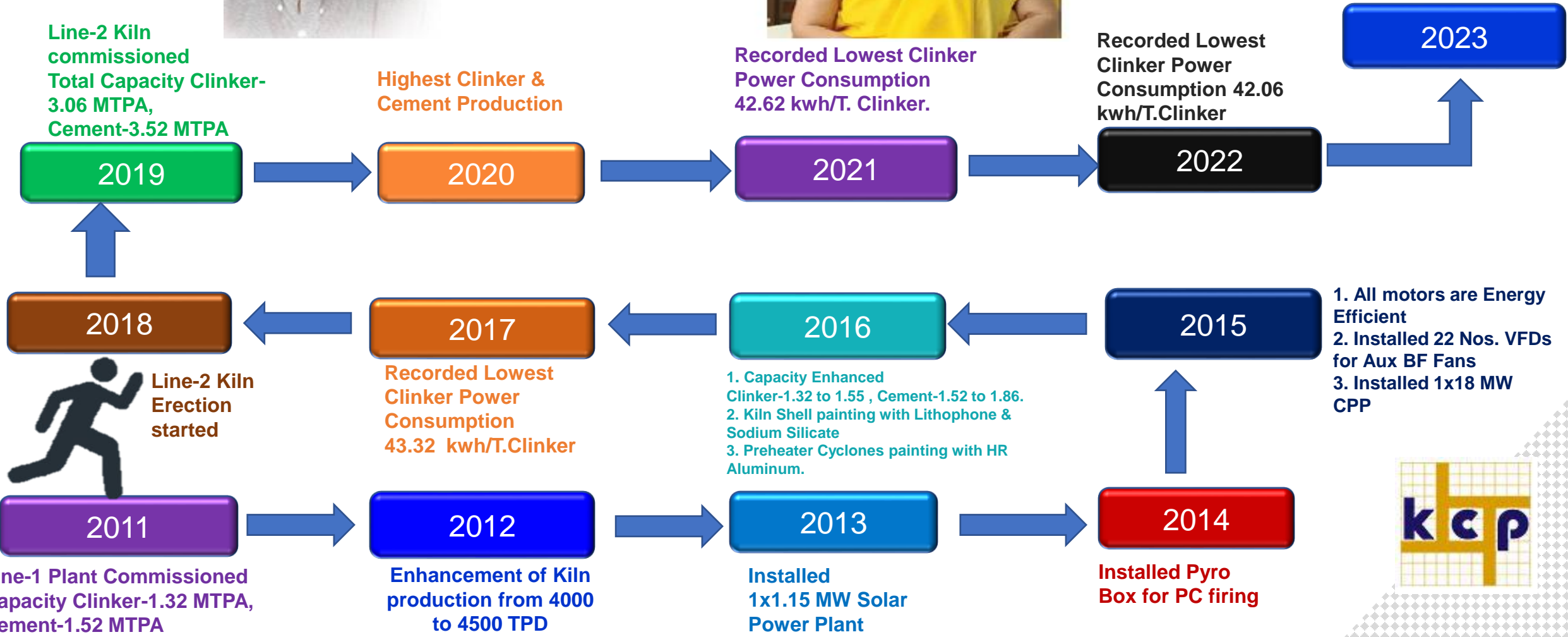
WIND POWER,  
THIRUNELVELI  
3.25 MW

HOTEL MERCURE  
KCP, HYDERABAD

# UNIT MILESTONES



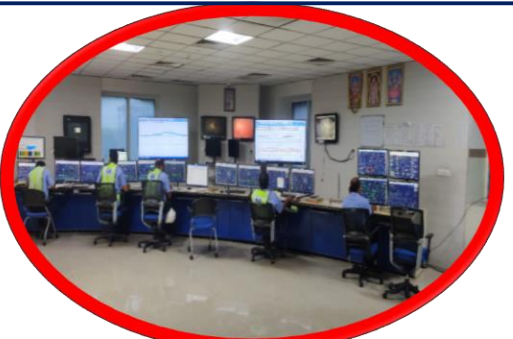
*KCP's Ultimate goal is to achieve the status of "Greenest Cement Plant" among all Cement Units in India and Be the role model*



# KCP'S STATE OF ART TECHNOLOGY

Low Electrical

Consistent Quality



PH 8864-6 stage

CCR

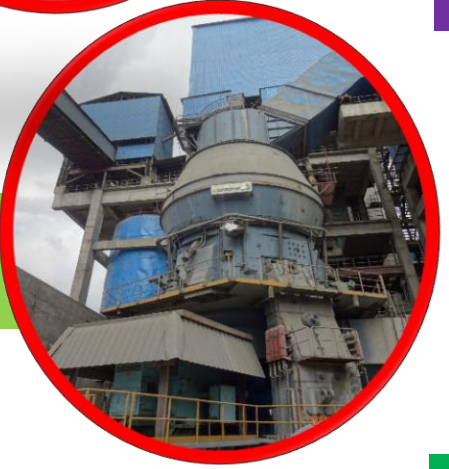
LOESCHE LM-46.4



PSC3-103.12 T



LOESCHE LM-53.3+3 C/S



CEMENT UNIT-II

Pulse Jet Bag Filter

Low Thermal

Low Emissions



Pyro Jet HPJ 286 KO

Robotic lab



# ACHIEVEMENTS BY STATE OF ART TECHNOLOGY

ELECTRICAL ENERGY CONSUMPTION

THERMAL ENERGY CONSUMPTION

ENVIRONMENT EMISSIONS



**CEMENT UNIT-II**

SYSTEM AVAILABILITY

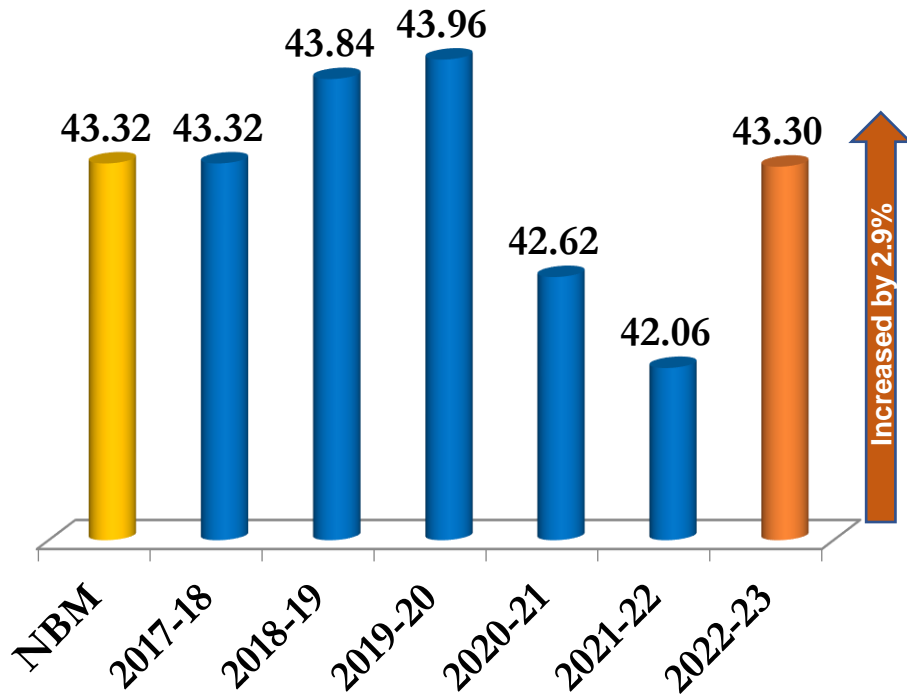
EQUIPMENT RELIABILITY

CONSISTENT QUALITY

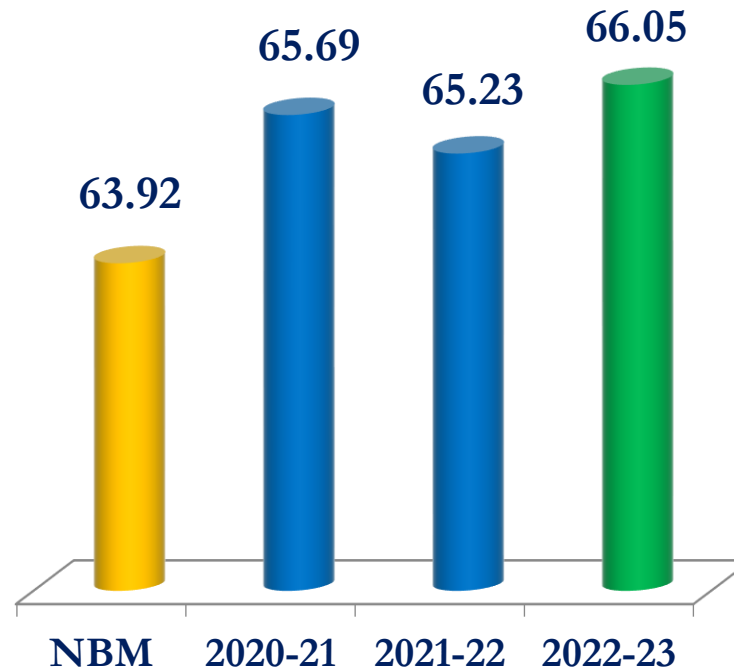


# Electrical & Thermal Energy Performance

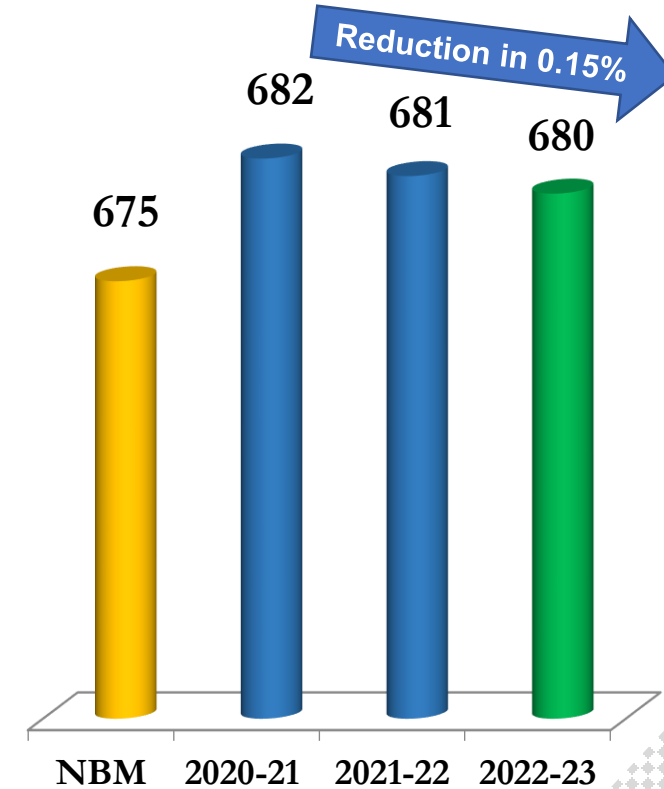
Specific Power Consumption,  
Kwh/ T. Clinker



Overall Specific Power  
Consumption, Kwh/T. Cement



Specific Heat Consumption,  
Kcal/Kg.Clinker



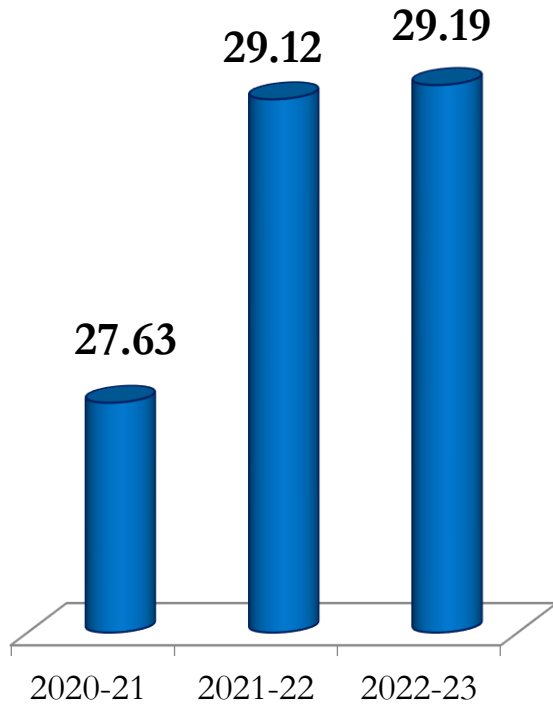
1. Increase in Sp.Energy up to Pre-Clinkerisation due to Plant operated at low feed rate (power constraint)
2. Increase in Overall Sp.Energy is due to introduction of high blain(350m2/Kg) premium products-Super Shrestaa & RHPC

SEC & SHC Values are combined for both Lines

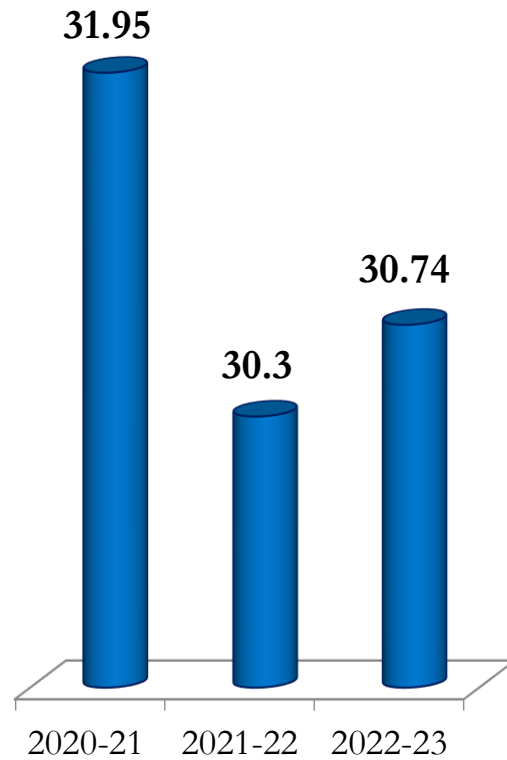


# Energy Performance in Last 3 years

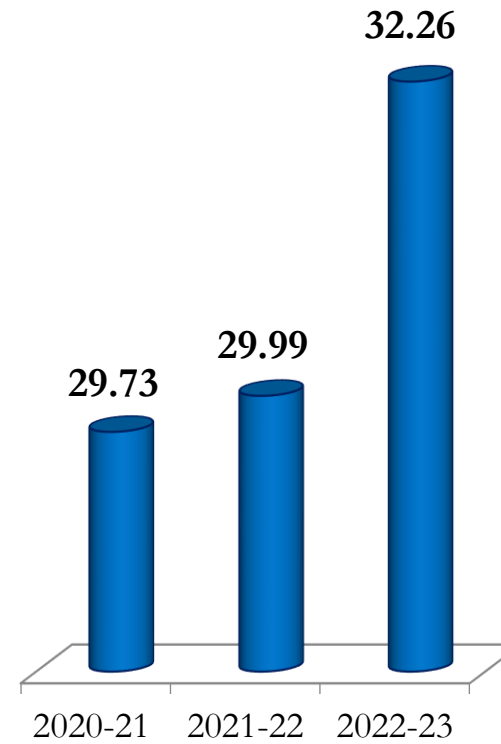
**OPC Specific Power Consumption, Kwh/T.Cement**



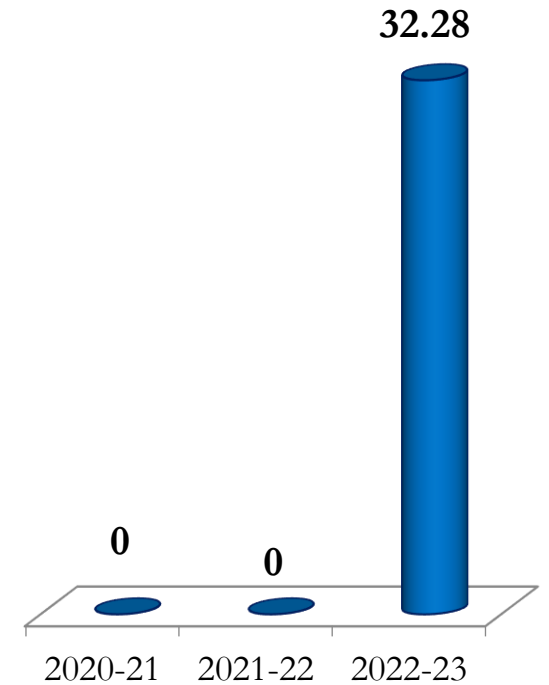
**PPC Specific Power Consumption, Kwh/T.Cement**



**RHPC Specific Power Consumption, Kwh/T.Cement**



**Super Sreshtaa Specific Power Consumption, Kwh/T.Cement**



**PRODUCT RATIO in % for FY 2022-23 OPC:PPC:RHPC:SS // 50:42:1:7**

**Ground partial quantity of OPC and RHPC in ball mills**

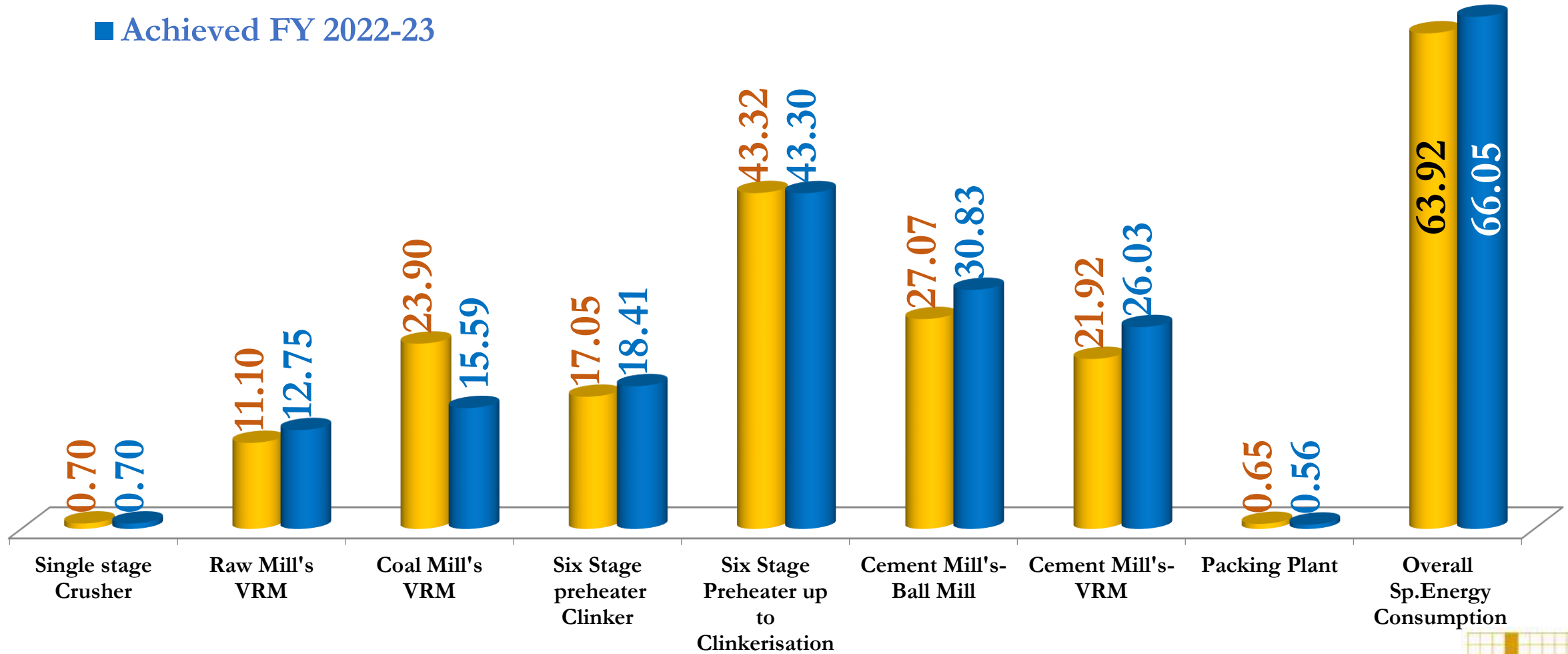
**Fly ash absorption is less in PPC hence power increased (Non-availability of fly ash)**





# SECTION WISE ELECTRICAL ENERGY NATIONAL BENCHMARK VS ACHIEVED

- National Bench Mark
- Achieved FY 2022-23



# Road map for achieving Target Electrical energy

2022-23  
66.05 kwh/T of  
Cement

Enhancement of CM-2  
Production With Mix of  
Grinding Aid 1.0 Kwh/T of  
Cement

2

1

Coal Mill-2 duct modification  
with pre-collector  
arrangement  
3.0 kwh/T of material  
(0.5 Kwh/T of Cement)

3

Reduction in clinker factor from  
0.83 to **0.80** - around 2 Kwh / T  
of Cement



2023-24  
Target 62.55  
kwh/T of Cement



# Road map for achieving Target Thermal energy

**2022-23**  
**680 kcal/Kg**  
**Clinker**

**Line-2 Cooler Extension**  
**5 kcal/Kg Clinker**



**1**

**Line-1 Cooler**  
**replacement 5Kcal/kg**  
**Clinker**

**2**

**Target to achieve**  
**National**  
**Benchmark 675**  
**Kcal/Kg Clinker**



# Long Term Projects on Energy Efficiency

S.No	Project	Estimated Investment, Rs. Crores	Target	Payback, Months
1	Line-1& 2 Preheater HR Aluminizing	1.8	2023	24
2	Coal Mill-2 Gas Ducting modification with Pre-Collector arrangement	0.2	2023	20
3	Installation of 14.0 MW Waste Heat Recovery for Line-1&2 Kiln	160.0	2024	60
4	Installation of 4x1.15 MW Solar Power Plant	20.0	2024	85
5	Line-1 Cooler Modification & Line-2 Cooler extension	30	2025	36





# ***ENERGY CONSERVATION MEASURES IMPLEMENTED FY 2022-23***



# Energy Conservation Projects

Detail	Unit	2020-21	2021-22	2022-23	Over All (FY 20, 21, 22)
Total no.of Encon Projects	Nos.	13	13	10	36
Encon Projects with Nil Investments	Nos.	8	5	7	20
Total Investment made	Rs.Lakhs	16.4	424.2	4.7	445.3
Total Savings made	Rs.Lakhs	232.0	515.6	111.2	858.8
Electrical Energy Saved	Lakh Units	39.89	42.72	2.23	84.84
	Rs.Lakhs	215.4	230.6	14.2	460.2
Thermal Energy Saved	MTOE	0.1628	0.6244	0.5765	1.3637
	Rs. Lakhs	16.6	285	99.4	401.0
Impact on SEC	KWH/Ton of Cement	65.69	65.23	66.05	Introduction of high blain premium products:: SS & RHPC
	Kcal/ Kg of Clinker	682	681	680	



# Energy Saving Projects Implemented in 2022-23

S.No	Energy Saving Project	Energy Saving, Lac Rs/Annam	Investment	Payback Months
<b>Zero Investment</b>				
1	In house modification for fly ash silo extraction discharge air slide modified and replaced blower motor from 5.5kw to 3.7kw	0.8	0	0
2	In house modification for CM-1 Bag house Discharge airslide blowers interconnectivity	1.5	0	0
3	In house modification for CM-2 Bag house Discharge airslide blowers interconnectivity	1.6	0	0
4	In house modification for CM-3 Flyash circuit by arranging interconnectivity of roots blowers	2.8	0	0
5	Implementation of interlock with PPC Based operation for Flyash weigh bin BF Motor to avoid idle run hrs	4.1	0	0
6	Implementation of programable logic for 4A1MS1 with 4A1BC1-to avoid idle run hrs	0.3	0	0
7	Avoided idle running hours of CM-1&2 water spray pump motor	0.2	0	0
<b>With Investment</b>				
8	Installation of Solar Water Heaters in colony Executive Block	0.4	3.0	19
9	Replacement of Conventional Lights with LED Lights	0.18	1.50	09
10	Fuel Savings by Improvement of Cooler Recuperation Efficiency in Line-1 (Lower Cooler Recuperation Efficiency)	99.4	0.20	01
<b>Total- Rs. In Lac</b>		<b>111.28</b>	<b>4.7</b>	



# Energy Saving Projects Implemented in 2021-22

S.No	Energy Saving Project	Energy Saving, Lac Rs/Annam	Investment	Payback Months
<b>Zero Investment</b>				
1	Power Savings attained by changing motor connection in auxiliary Cooling Tower Fans	0.79	0	0
2	Fuel Savings by Improvement of Cooler Recuperation Efficiency in Line-2 (Lower Cooler Recuperation Efficiency)	406	0	0
3	Fuel Savings by Improvement of TA Temperature in Line-2 (High Temperature drop across TA duct)	75	0	0
4	Fuel Savings by Improvement of Cooler Recuperation Efficiency in Line-1 (Lower Cooler Recuperation Efficiency)	461.6	0	0
5	Fuel Savings by Improvement of TA Temperature in Line-1 (High Temperature drop across TA duct)	134.1	0	0
		<b>1077.49</b>		
<b>With Investment</b>				
6	Installation of Solar Water Heaters in colony A5,E3 and Executive Blocks	0.6	9.0	15
7	CM-3 Booster fan and Hot air duct Installation	32.85	416.00	13
8	Replacement of Conventional Lights with LED Lights	0.28	1.40	05
9	Optimization of Packer-1&2 Bags Cleaning Blower	0.61	0.10	01
10	Optimization of Process Cooling Tower by keeping AHU-CT bypass	0.62	0.10	01
11	Optimization of Flyash tanker Unloading Compressor	3.75	0.60	01
12	Raw Mill-2 Fan inlet duct modification	1.18	0.10	01
13	Installation of Level sensor in Cement mill-3 reject hoppers	2.37	0.90	04
		<b>Total Rs. In Lac 42.26</b>	<b>428.2</b>	

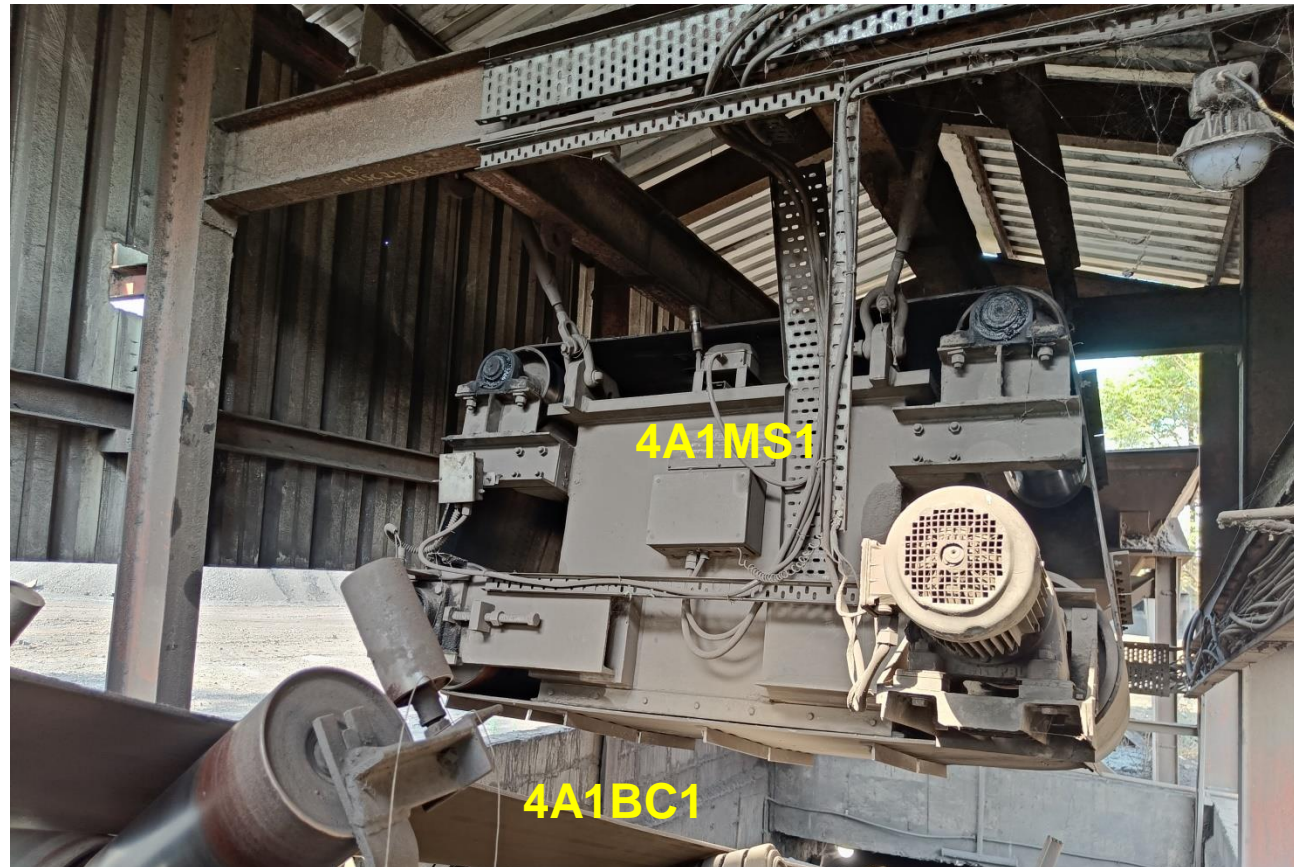


# INNOVATIVE PROJECT

5 *HERE*  
*A WAY...*  
to FIND  
additional  
Energy Saving  
opportunities ↗



# 1. Implementation of programmable logic for 4A1MS1 with 4A1BC1-to avoid idle run hrs



## Before:

- Magnetic separator 4A1MS1 was running without interlock with 4A1BC1 belt conveyor.
- Idle running hours: 2.0hours/Day.

## After:

- Implementation of Programmable logic to 4A1MS1 with 4A1BC1 belt conveyor.
- Reduced idle running hours: 2.0hours/Day.

## Benefit:

- **Reduced idle running hours: 2.0 hours/day**
- Power consumption reduced: 20KWH/day
- Cost of unit power: Rs. 6.40/-
- **Cost savings per year:**  
**20KWh/dayx300 daysxRs.6.4=Rs.38,400/-**



## 2. In-house Modification of Flyash Silo Extraction Discharge air Slide blower

Fly ash silo extraction discharge air slide blower modification. Replaced Blower from 5.5kw to 3.7kw

### BEFORE

- Power = 5.5 KW
- Current = 5A
- Volume = 900m<sup>3</sup>/hr

### AFTER

- Power = 3.7 KW
- Current = 4A
- Volume = 300m<sup>3</sup>/hr

**Air flow required for existing air slide:**

Air slide details = 400 mm X 2.5 mtr.

No. of boxes = 2 Nos.

Air flow = Area\*air velocity

$$= 0.4*5*2.0*60$$

$$= 180 \text{ m}^3/\text{hr} = 180*1.25 \text{ (safety factor)}$$

$$= 225 \text{ m}^3/\text{hr} \text{ (Required volume = 300 m}^3/\text{hr)}$$

- Before changing 5.5 kw Blower, motor taking load = 2.87 kw
- After installed 3.7 kw blower, motor taking load = 2.29 kw
- **Power saving = 0.58kw**
- **Per month cost saving = 0.58\*6.4\*24\*30 = Rs. 2,505/-**
- **Annual power saving cost = Rs.30,067/-**

**Before**



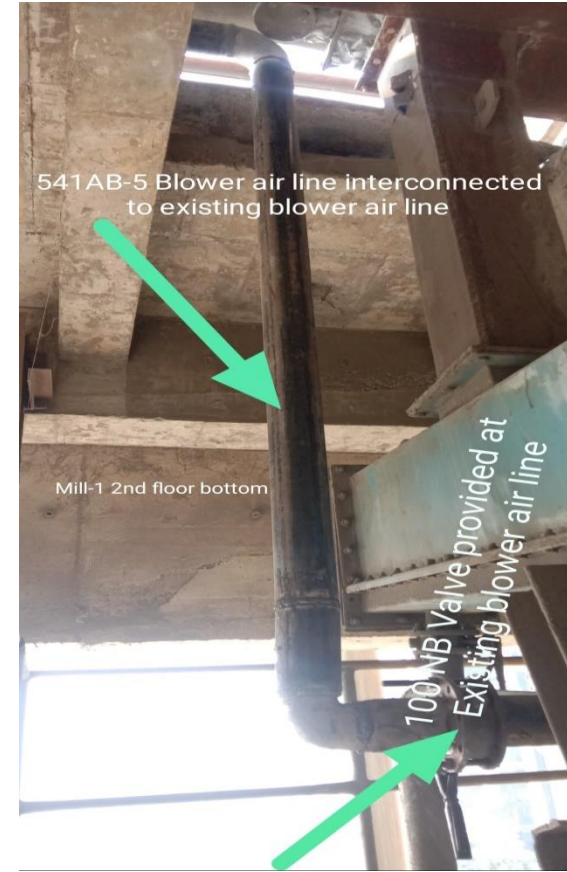
**5.5 KW MOTOR**

**After**



**3.7 KW MOTOR**

# 3. In house modification for CM-1 Bag house Discharge airslide blowers interconnectivity



## Before Modification

541AB5 & 541AB4 Blowers separate air lines

541AB5 Blower  
Motor-5.5 Kw  
Volume:610 M3/Hr,  
Pressure:0.5 Bar

541AB4 Blower  
Motor-3.7 Kw  
Volume:300 M3/Hr,  
Pressure:0.5 Bar

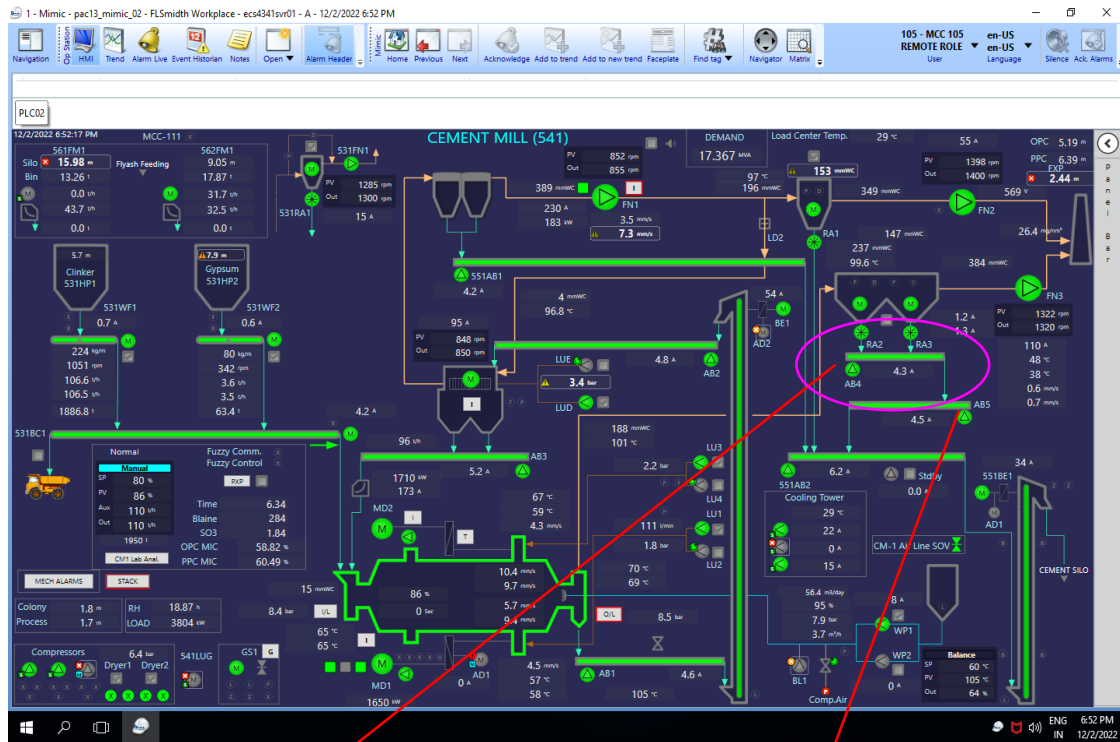
## After Modification

541AB5 to 541AB4 Blowers Interconnected air lines

541AB5 Blower  
Motor-5.5 Kw  
Volume:610 M3/Hr,  
Pressure:0.5 Bar



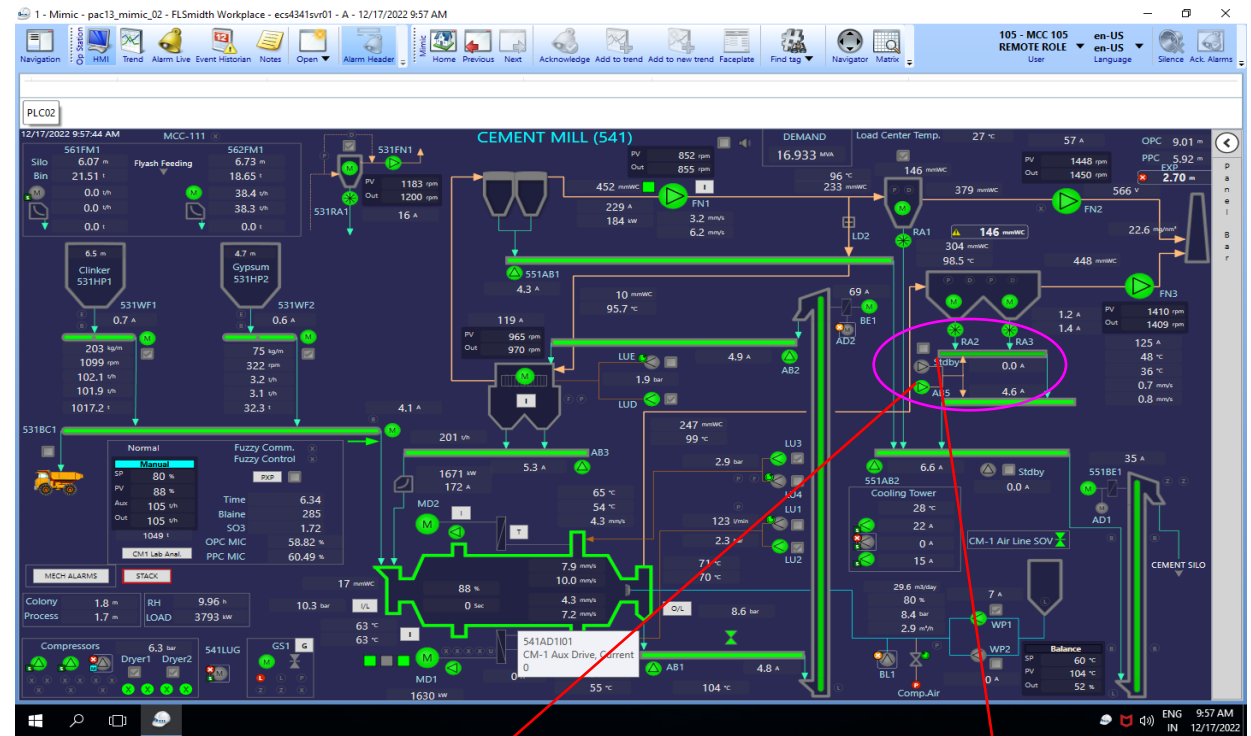
# 3. In house modification for Cement Mill-1 Bag house Discharge airslide blowers discharge lines interconnectivity



**Before Modification**

541AB4  
Consume 2.5KWh

541AB5  
Consume 2.5KWh



**After Modification**

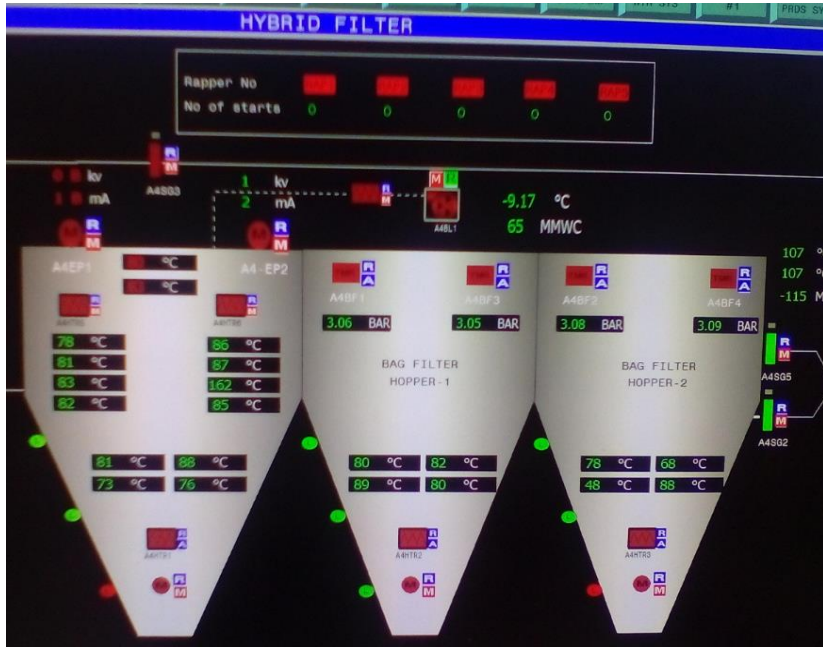
541AB5  
Consume 2.5KWh

541AB4  
Blower stopped & Put in standby mode

- **Total power saving in CM-1 circuit - 4.3A(2.5Kw)**
- Cement Mill-1 circuit running hours for day – 24Hrs.
- Power cost savings for one day – Rs.384/- KWh @ Rs.6.40/-
- **Cost savings for year – Rs. 1.40 Lac**



# 4.ESP Hybrid filter D.P Purging system Optimization in CPP



## Before

Auto purging system all timer panels starts when DP reaches 120mmwc & stops 90mmwc.

Compressor Run Hours/Day:19 Hrs  
Motor KW:75

## After

S no	Timer panels	ON Purging	OFF Purging
1	Panel-1	≥90 mmwc	≤85 mmwc
2	Panel-2	≥80 mmwc	≤75 mmwc
3	Panel-3	≥70 mmwc	≤65 mmwc
4	Panel-4	≥60 mmwc	≤50 mmwc

Timer panels operate at individual settings independently

Compressor Run Hours/ Day: 17Hrs

Description	UoM	Savings
Compressor loading hours save	Hrs/day	2
Power saving	Kwh/day	130
Power savings @ Rs.8.00/KWh	Rs./day	1040
Power saving	Kwh/year	47,450
Total Savings per anum	Rs.in Lac.	3.7
Investment	Rs	NIL
Return on investment	Month	Immediately



# 5. Conversion of IAC Compressor star-delta to VFD in CPP



DESCRIPTION	UOM	BEFORE	AFTER	REMARKS
Power Consumption	kwh/day	2070	1680	75 Kw IAC air compressor had modified from star - delta to VFD, used existing spare ,without investment.
Investment	Rs	Nil		
Power saving	Kwh/day	390		
Per day saving @8.0/kwh	Rs./day	3120		
Power saving	kwh/year	<b>1,42,350</b>		
Savings per year	Rs in Lac.	<b>11.38</b>		
Return investment	Months	<b>Immediately</b>		



# UTILIZATION OF RENEWABLE ENERGY

## Total Renewable Energy

- 12.65 MW

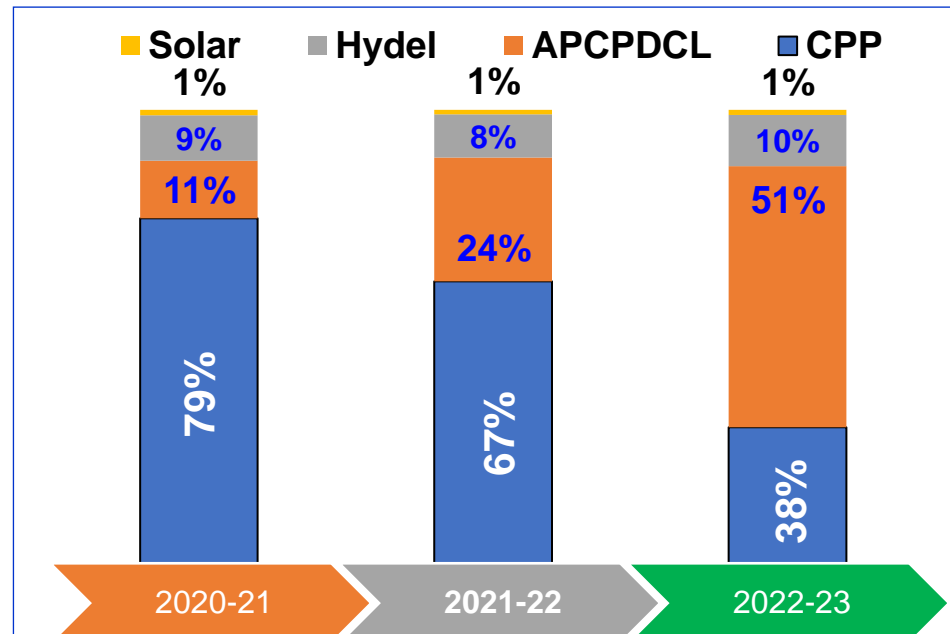
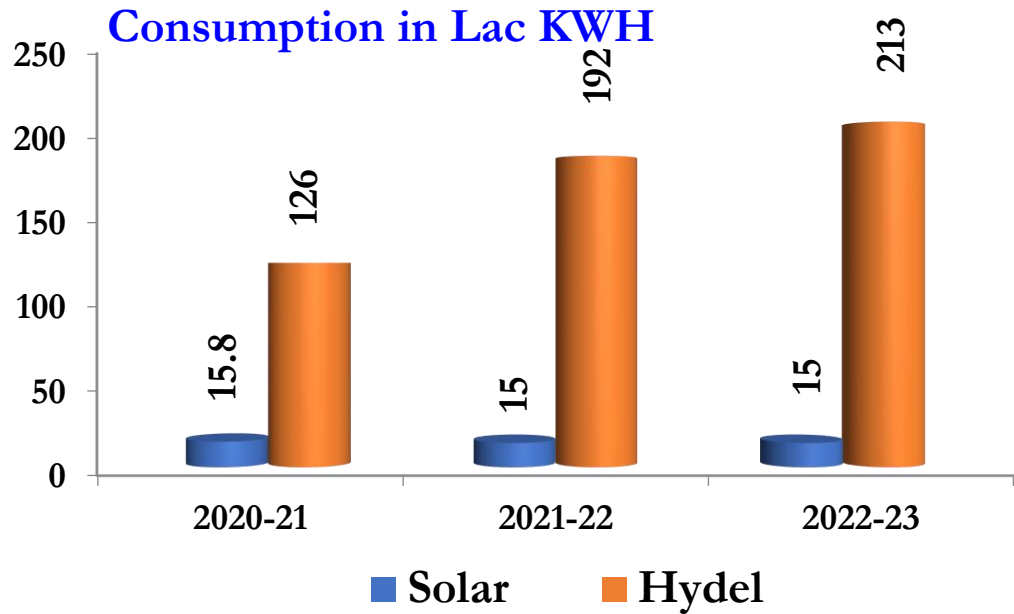
1.15 MW Solar Power

8.25 MW Hydel Power

3.25 MW Wind Power



## Consumption in Lac KWH





# Solar Energy Utilization

## Solar Street lights



**INVESTMENT MADE: 6.0 LAKHS**  
**SAVING: 1.0 LAKHS/ANNUM**

## Solar Water Pump at Mango Garden



**INVESTMENT MADE: 5.0 LAKHS**  
**SAVING: 1.2 LAKHS/ANNUM**

## Solar Water Heaters for Colony – 150 Flats



**INVESTMENT MADE: 8.5 LAKHS**  
**SAVING: 6.0 LAKHS/ANNUM**

## Solar Fencing around the Residential Colony



**INVESTMENT MADE:**  
**1.2 LAKHS**



# Green Power Energy Utilization

## RPP Obligation: 2022-23

RPPO FY2022-23		
Total Energy Consumed from CPP+IEX:41718 MWH		
Description		
Total RPPO for FY 2022-23	18%	
Non- Solar RPPO	10.50%	
Solar RPPO	7.50%	
Non-Solar		
Non- Solar REC-No	4380	
By hydel Wheeling Energy Substitution Non-Solar RPPO fulfilled-MWH	-4,390	By hydel Wheeling Energy Substitution Non-Solar RPO 100% fulfilled.
Solar		
Solar REC-No	3128	
By purchase of GDAM Power form IEX fulfilled Solar RECs	619	
Solar RECs to be fulfilled	2509	
Cost of Each Solar REC	2300	Rs/REC
Solar REC Cost	57,70,700	Rs/-.
Non Solar REC Cost	0	Rs/-.
Total Cost for RPPO to be incurred	57,70,700	Rs/-.



### Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : January-2023 Issued on : 01/02/2023  
Portfolio Name: The\_K\_C\_P\_Limited\_VJA\_3035

This is certified that The\_K\_C\_P\_Limited\_VJA\_3035 has purchased 111.42 MWh (at regional periphery) of Renewable Energy for the period 01/01/2023 to 31/01/2023 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
0.05	111.37	0	111.42

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

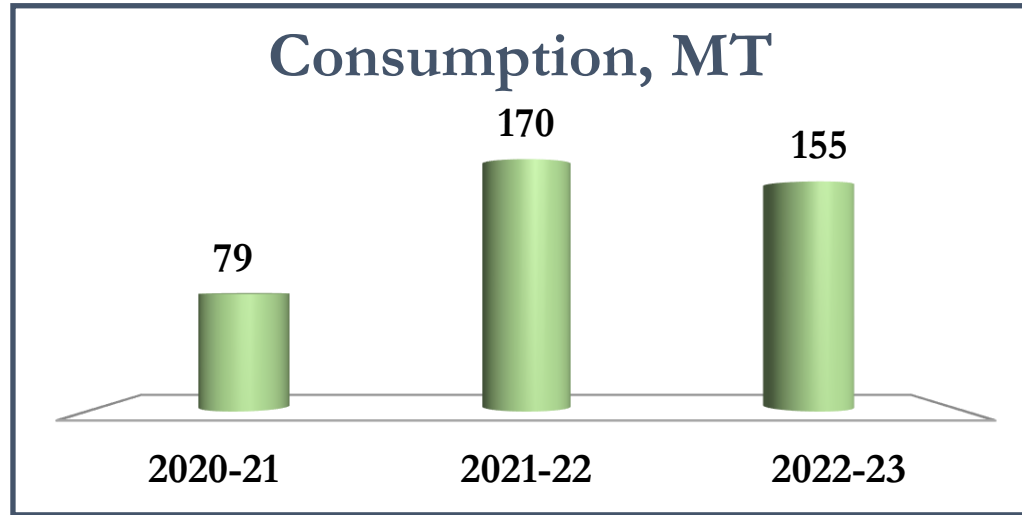
Amit Kumar  
Sr VP Market Operations

\*Computer generated report signature not required.



# Utilization of Green Fuel

- ❑ WOODEN CHIPS
- ❑ PLASTIC WASTE
- ❑ MIX AGRO WASTE
- ❑ USED LUBRICANT
- ❑ RICE HUSK
- ❑ PYROLYSIS OIL



AFR Feeding system



Collection of Garbage in Colony



Incineration in Pre Calciner



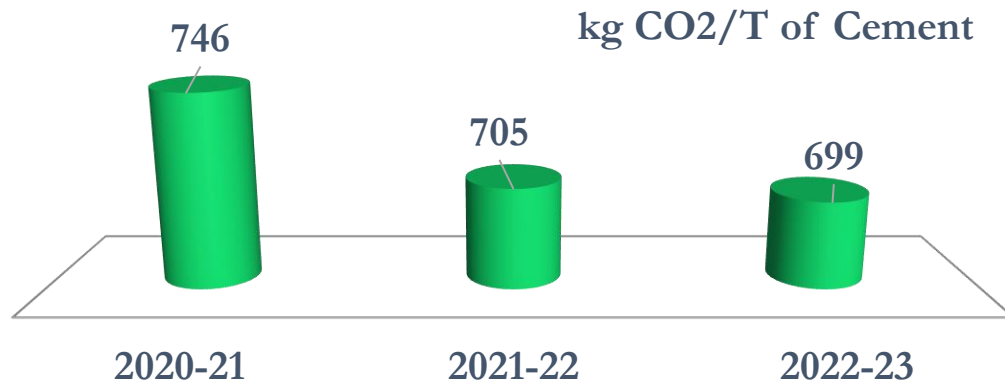
Firing Waste Lubricant oil in PC



Pyrolysis oil for kiln heat up



# GREEN HOUSE GAS Emissions



- Battery operated vehicle inside the plant for internal people transportation
- Reducing the lead distance of transporting the cement by selecting the nearest distance either from UNIT-I or UNIT-II Cement manufacturing units.
- Reduction of NO<sub>x</sub> emission levels by adoption of newer technologies like installation of low NO<sub>x</sub> pyro jet burner along with long pre-calciner with pyro top supplied by Humboldt Wedag.
- Utilization of fly ash to the maximum permissible extent and promotion of higher PPC volumes to the maximum extent.
- Following Reverse Logistics for transportation of Cement and bringing Coal, Gypsum and Additives.

Miyawaki Plantation performed in 2 Acres

## Efforts to reduce GHG emissions

- ❖ Miyawaki Plantation.
- ❖ Installation of WHR
- ❖ Installation of 4.60 MW Solar power plant
- ❖ Promoting blended cements
- ❖ Colony Street lighting & Plant lighting with LED lights.



# Green supply chain



The KCP Limited  
Cement Unit-II, Ramakrishnapuram



## Green Purchase Policy

Following standard systems & procedures defined for selecting vendors for critical equipment supplies/Major equipment and compliance of same is monitored from time to time.

- KCP is having a purchase manual with pre-defined procedure for all procurements.
- Procurement of EEF LT Motors.
- Procurement of Eco Friendly A/C package units, and VOC free paints.
- Reduce environmental footprint by means of material, energy & water conservation.
- Ensure that asbestos products not procured in the plant.
- Sourcing raw materials from nearby sources so that travel distance is reduced and vehicle usage is curtailed thereby helping environment in minimizing carbon & sound pollution. Usage of Roads and other relevant resources like diesel/ lubs/ tyres shall also be reduced.
- Installation of speed controllers in our new heavy vehicles.
- Procurement of Energy Efficient rated electrical appliances. All the transporters including raw materials transporters shall be advised for strict compliance of Green supply chain transport policy.

  
Vice President - Operations

Dated: 01 April 2019

## Green Supply Chain Implementations:

1. Creating awareness on Environmental Impacts.
2. Rethinking of material requirements and consumption for sustainability.
3. Reducing the use of hazardous material.
4. Improved energy efficiency Materials Purchase.
5. Reducing the pollution and noise levels and using recycled materials and recycling waste.
6. Customer preference.
7. Continuously compliance the environmental regulations.



- Manufacturing of fly ash based pavers, Hollow & Concrete bricks  
Capacity: 20,000 – 25,000 no's per day ( Investment: Rs. 2.0 cores.)
- The fly ash & Bed material generated in CPP are being used for the manufacturing of Hollow bricks, Concrete solid bricks & Colored Pavers.
- Recycling of CPP waste neutralization water to Cement Plant for equipment process & Cooling to avoid scaling in Pipe lines.'



# Green supply chain Best Practices



Before:  
All bag filter fans in DOL  
Operation



After:  
Installed 22 No's  
VFD s for all the bag  
filter fans

50  
%



FTL Lights



150 No's LED  
Lights

65  
%



Switch over 3 Star  
Rating AC



5 Star Inverter Rating

68  
%



Before: IE2 Motor



After: IE3 Motor

2  
%



3 Star Rating



5 Star Rating

65  
%

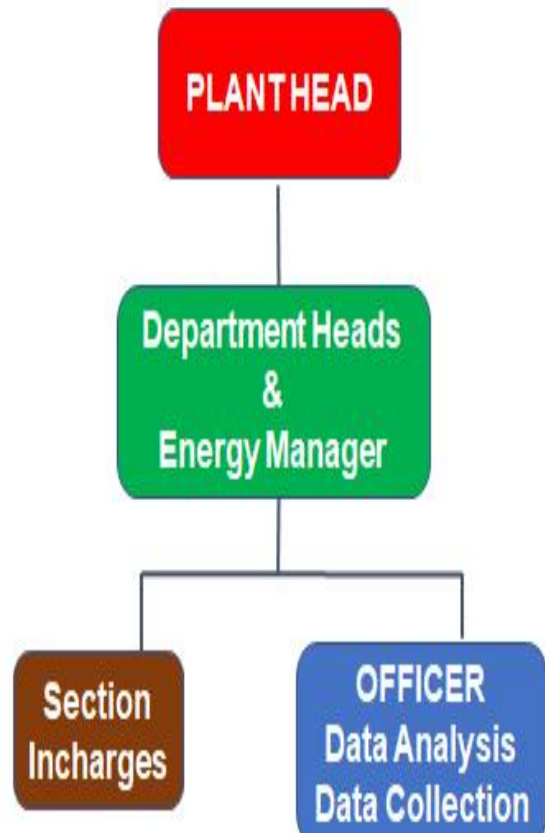


## Initiatives:

- ❖ 100% safety on roads as voice enabled GPS is installed which alerts the driver on possible risk.
- ❖ Ship more cement covering more distance than before.
- ❖ Better planning is ensured by the company with its stakeholders - transporter, dealer, trucker and society.
- ❖ Vehicle service center.



# Daily Energy Monitoring Report & Performance of major Equipment by team members



Designation	Roles & Responsibilities
Plant Head	<ul style="list-style-type: none"> <li>Drives energy saving culture in the organization.</li> <li>Set targets for reduction in various parameters inline with the vision &amp; Energy policy.</li> <li>Fiscal validation of Energy saving projects and necessary financial allocation.</li> </ul>
Department Heads, Energy Manager	<ul style="list-style-type: none"> <li>Review status of Energy saving projects through Daily Review Meetings.</li> <li>Drive employee involvement initiatives.</li> </ul>
Team Members	<ul style="list-style-type: none"> <li>Identification &amp; Implementation of energy conservation projects.</li> <li>Drive employee involvement initiatives.</li> <li>Generate energy conservation ideas.</li> <li>Measure, Monitor &amp; analyze section wise energy consumption in the factory.</li> </ul>

Energy Performance Monitoring Report-2022-23					
S.NO	DESCRIPTION	Sp.Energy Consumption	Responsibility	TARGET	ACTUAL
				FY 22-23	
1	LS CRUSHER	Kwh/Ton of Lime Stone	CH.SRINIVASA REDDY	0.70	0.70
2	RAW MILL-1	Kwh/Ton of Raw meal	M.SATYANARAYANA	12.00	13.21
3	RAW MILL-2	Kwh/Ton of Raw meal	Y.KISHORE BABU	12.50	12.49
4	KILN-1	Kwh/Ton of Clinker	P NARASIMHA RAO	18.00	18.73
5	KILN-2	Kwh/Ton of Clinker	J V S GUNNAIAH RAJU	18.00	18.17
6	COAL MILL-1	Kwh/Ton of Coal	P.SRINIVASARAO	15.00	15.06
7	COAL MILL-2	Kwh/Ton of Coal	E RAMU	15.50	16.03
8	CEMENT MILL-1	Kwh/Ton of Cement	M.RAMESH	27.00	31.03
9	CEMENT MILL-2	Kwh/Ton of Cement	CH SURESH REEDY	27.00	30.59
10	CEMENT MILL-3	Kwh/Ton of Cement	CH V RAMARAJU	24.50	22.45
11	PACKING PLANTS	Kwh/Ton of Cement	P BIXAM & N S RAJU	0.65	0.56
12	UTILITIES	Kwh/Ton of Clinker	G.MALLESH	1.7	1.76
13	SERVICES	Kwh/Ton of Cement	MD.RAHIM	2.0	1.5
14	HEAT CONSUMPTION	KCal/Kg of Clinker	B.YOGESWAR	675	680
15	EXPLOSIVE ENERGY	Tons/Kg of Explosive	P.RAMAKRISHNA	9.00	9.60



# Strategies adopted for Team work & employee involvement

- ✓ Kaizen & Suggestion Scheme
- ✓ Cross Functional Team
- ✓ Quality Circles
- ✓ Chat with Unit Head
- ✓ Employee Energy Score Card
- ✓ Participation in Seminars
- ✓ External trainings
- ✓ Energy Conservation week
- ✓ Safety Messages sharing in Gate meeting / monthly safety magazine
- ✓ National Safety Day Celebrations
- ✓ Safety Committee meetings
- ✓ Monthly Fun Hungama Celebrations
- ✓ Monthly Energy committee meetings
- ✓ Safety Walks



Employee Recognition at shop floor level



## Energy Projects Implementation Methodology

- ❖ Identifying the potential Energy saving equipment's / Areas by Plant Engineers.
- ❖ Categorized into No investment, Low investment and High investment.
- ❖ No/Low investment project Implementation-Immediately.
- ❖ High investment projects proposals—Put up for CAPEX approval.
- ❖ Review of project implementation, Completion status.
- ❖ Reporting the benefits/savings through monitoring and reviewing the performance.

ENERGY SCORE CARD			
SECTION	DATE	26.07.2022	
KILN - 2	SEC : Kwh/Ton of clinker		
	TARGET	DAY ACHIEVED	MONTH AVG
PH FAN	6.5	6.24	5.70
ESP FAN	0.7	0.80	0.76
RABH FAN	1.5	1.35	1.36
KILN MAIN DRIVE	1.5	1.25	1.54
COOLER FANS	4.5	4.74	4.99
AUX	3.3	3.62	3.64
CLINKERISTION	18.00	18.00	17.98

## Focus for the Energy Efficiency

- ❖ Daily Monitoring
- ❖ Trainings
- ❖ Innovative Modifications
- ❖ Periodical upgradation of new technological equipment's

# Integrated Management System



## MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 238117-2018-AQ-IND-RvA Initial certification date: 08 September 1994 Valid: 01 May 2021 – 30 April 2024

This is to certify that the management system of  
**The KCP Limited  
Cement Unit - II (Manufacturing Division)**  
Ramakrishnapuram, Muktyala (V), Jaggayyapet (M), Krishna Dist - 521 457, India  
and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:  
**ISO 9001:2015**

This certificate is valid for the following scope:  
**Manufacture & sale of clinker and cement**

Place and date:  
Chennai, 13 April 2021

For the issuing office:  
DNV - Business Assurance  
PCMA, No. 16, GST Road, Andalur,  
Chennai - PIN - 600 076, India



Shivanan Madhavan  
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.  
ACCREDITED UNIT: DNV GL Business Assurance B.V., Zoelweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102022889 www.dnvgl.com/assurance



## MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 1000050431-EMC-RvA-IND Initial certification date: 04 May 2016 Valid: 21 August 2021 – 21 August 2024

This is to certify that the management system of  
**The KCP Limited - Cement Unit - II  
(Manufacturing Division)**  
Ramakrishnapuram, Muktyala Village, Jaggayyapet Mandal, Krishna District - 521 457, Andhra Pradesh, India

has been found to conform to the Energy Management System standard:  
**ISO 50001:2018**

This certificate is valid for the following scope:  
**Manufacture of clinker and cement**

Place and date:  
Barendrecht, 30 June 2021

For the issuing office:  
DNV - Business Assurance  
Zoelweg 1, 2994 LB, Barendrecht, Netherlands



Erik Koek  
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.  
ACCREDITED UNIT: DNV GL Business Assurance B.V., Zoelweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102022889 www.dnvgl.com/assurance



## MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 157474-2016-AM-IND-RvA Initial certification date: 15 April 2016 Valid: 01 May 2021 – 30 April 2024

This is to certify that the management system of  
**The KCP Limited  
Cement Unit - II (Manufacturing Division)**  
Ramakrishnapuram, Muktyala Village, Jaggayyapet Mandal, Krishna District - 521 457,  
Andhra Pradesh, India

has been found to conform to the Environmental Management System standard:  
**ISO 14001:2015**

This certificate is valid for the following scope:  
**Manufacture of clinker and cement**

Place and date:  
Chennai, 13 April 2021

For the issuing office:  
DNV - Business Assurance  
PCMA, No. 16, GST Road, Andalur,  
Chennai - PIN - 600 076, India



Shivanan Madhavan  
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.  
ACCREDITED UNIT: DNV GL Business Assurance B.V., Zoelweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102022889 www.dnvgl.com/assurance



## MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 284670-2018-OH&S-IND-RvA Initial certification date: 07 March 2019 Valid: 19 April 2021 – 19 April 2024

This is to certify that the management system of  
**The KCP Limited - Cement Unit - II (Manufacturing Division)**  
Ramakrishnapuram, Muktyala (V) Jaggayyapet (M) Krishna Dist 521 457 India

has been found to conform to the Occupational Health and Safety Management System standard:  
**ISO 45001:2018**

This certificate is valid for the following scope:  
**Manufacture of clinker and cement**

Place and date:  
Barendrecht, 19 April 2021

For the issuing office:  
DNV - Business Assurance  
Zoelweg 1, 2994 LB, Barendrecht, Netherlands



Erik Koek  
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.  
ACCREDITED UNIT: DNV GL Business Assurance B.V., Zoelweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102022889 www.dnvgl.com/assurance



# IMS policy & Learning from CII Awards ...

## IMS Policy



The KCP Limited  
CEMENT UNIT-II  
RAMAKRISHNAPURAM



### IMS Policy


(Quality, Environment, Energy and Occupational Health & Safety)

We are committed to achieve sustainable growth and continual improvement in the performance of Integrated Management System in the manufacturing of clinker and cement.

We shall achieve this by:

- Manufacturing and supply of Clinker , Cement with consistent quality
- Protection of the environment and prevention of pollution
- Ensuring the availability of information and necessary resources to achieve IMS objectives and Energy targets
- Improving the energy performance related to energy efficiency, energy usage and energy consumption
- Providing safe and healthy working conditions, including elimination of hazards and risk reduction, for the prevention of work related injury and ill health
- Promoting consultation and participation of workers and their representatives
- Complying with all applicable legal and other requirements
- Implementing Technological Innovations and providing with latest equipment,
- Knowledge enhancement and upgrading the professional skills through training and motivation, and
- Integrating the management systems' requirements with business processes of KCP

Dated: 01 Sep 2020

  
Dr V L INDIRA DUTT  
CHAIRPERSON & MANAGING DIRECTOR



Confederation of  
Indian Industry

## Learning from CII Awards ...

- To bring in recognition to the Organisation through unique innovative practices.
- Creating platform for sharing of knowledge which takes to sustainable growth through optimum utilization of resources, diversified Quality Products, Processes and Services for all our Stakeholders.
- Understand the Industry best and implement the same in our Organisation.
- Creating a competitive edge amongst the industries through right person is assigned for the right job and that they grow and contribute towards organizational excellence
- Employee engagement & belongingness increased

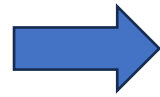
# NET ZERO commitment

## Roadmap For Achieving The Target Towards NET ZERO

- Proposed to install 14.0 MW Waste Heat Recovery System
- Enhancement of 4.66 MWp SOLAR PV PLANT
- Development of MIYAWAKI Plantation in -2 more Acres apart from existing 2 Acres.
- Green fuel utilization



# Journey towards Green Power



**TOTAL - 18.6 MW UNDER EXECUTION**



**WHRs - 14.0 MW**      **SOLAR - 4 X 1.15 MW**

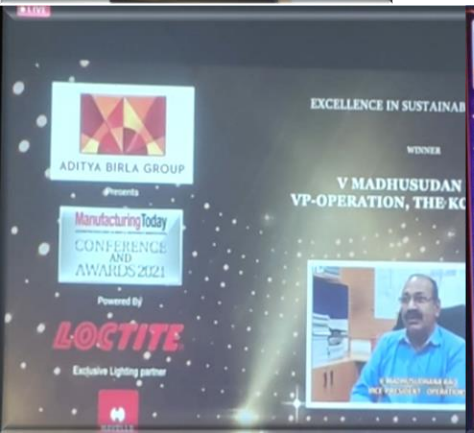


# THE KCP LIMITED, CEMENT UNIT-II, MUKTYALA, AWARDS RECEIVED AS ON...



- ❖ 2022: CPP has won CII's "Excellent Energy Efficient Unit"
- ❖ 2022: CPU-II has won CII's "Energy Efficient Unit" Award
- ❖ 2021: Excellence in Sustainability Award from Manufacturing Today
- ❖ 2021: National Award for "Excellent Energy Efficient Unit" for the year 2020-21 from CII in Cement Sector
- ❖ 2021: National Energy Leader award for the year 2020-21 from CII in Cement Sector
- ❖ 2021: Sectorial Topper in Cement Sector by CII-SR EHS Excellent Gold Award 2021

- ❖ 2020: National Award for Excellence in water Management
- ❖ 2020: Bagged First Place in Sectorial and Sustainability, in recognition of best practices in Environment, Health & Safety.
- ❖ 2020: National Excellence Energy Efficient in Energy Management
- ❖ 2019: 5 Star for Excellence in EHS practices
- ❖ 2019: Excellence in Sustainability by Manufacturing Today
- ❖ 2019: National Excellence Energy Efficient in Energy Management



# THE KCP LIMITED, CEMENT UNIT-II, MUKTYALA, AWARDS RECEIVED AS ON...



- ❖ 2018-19: NCB-Excellence in the field of Energy and Environment
- ❖ 2018: National Energy Efficient in Energy Management
- ❖ 2017-18: NCB-Excellence in the field of Energy and Environment
- ❖ 2017: National Excellent Energy Efficient in Energy Management
- ❖ 2016-17: NCB-Best Electrical Energy Performance Award
- ❖ 2016: National Energy Efficient in Energy Management

- ❖ 2016: 3 Star for Appreciation in EHS practices
- ❖ 2015: National Excellent Energy Efficient in Energy Management
- ❖ 2015: Most useful Presentation Award
- ❖ 2014-15: NCB-Best Electrical Energy Performance Award
- ❖ 2014: National Excellent Energy Efficient in Energy Management
- ❖ 2014: National Energy Conservation Award (BEE) in Cement Sector by Government of India, Ministry of Power
- ❖ 2013-14: NCB-Best Electrical Energy Performance Award





# Thank You



**Contact Details:**

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**Vice President-Operations**

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**Ph.No:08654-296006/7/8**



**Save**  
***Energy & Environment***

