



My Home Industries Private Limited Mellacheruvu Cement Works



Welcome you all
23rd National Award for Excellence in Energy Management 2022



Presented by : D.Venubabu (DGM-Elec)
M.Veerababu(Dy.Manager-Process)
S.Venkannababu(Asst.Manager-Process)



My Home Industries Pvt Limited (MHIPL) –At a Glance

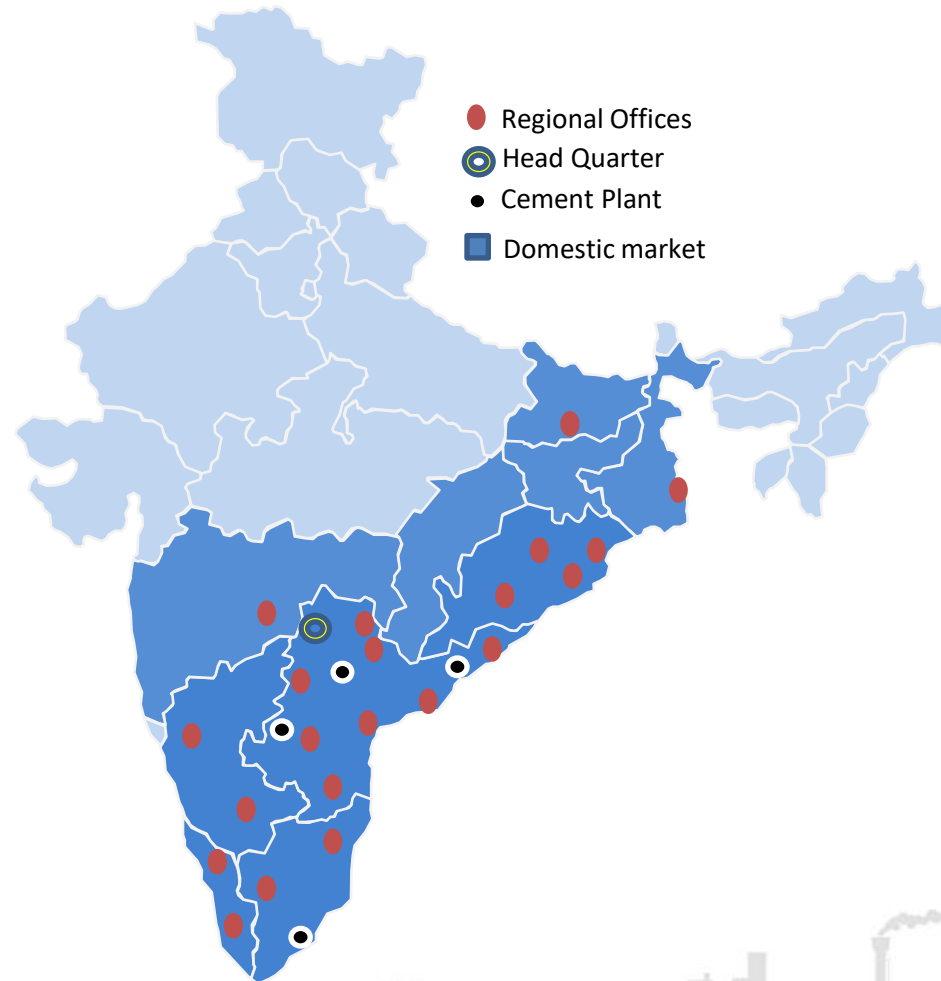


Highlights

- 10.2 mtpa capacity
- 5,000+ dealers sales network
- 23 Regional offices
- 95 MW Captive power plant incl. WHR
- 15 MW solar power plant

Maha cement plants

- Mellacheruvu cement works-MCW-3.5MTPA
- Vizag grinding unit-VGU-2.0MTPA
- Yanakandla cement works-YCW-3.2MTPA
- Tuticorin grinding unit-TGU-1.5MTPA



- 1998 – MCW Unit-1 0.2MTPA
- 2002 – MCW Unit-2
- 2006 – CPP 1
- 2007 – MCW Unit-3
- 2009 – VGU 2.0 MTPA
- 2012 – CPP 2 , Railway line at MCW
- 2013 – SJCL 3.2 MTPA
- 2016 – Solar Power-SJCL-11MW
- 2017 – TGU 1.5 MTPA, MCW -WHR
- 2019 – MHIPL - 10.2 MTPA

MCW INFORMATION

- Three units with state-of-the-art technology from Walchand Industries, FLSmidth Denmark and KHD Germany.
- Own Rake loading / Unloading siding
- Grid CMD - 10MVA
- CPP # 1 - 15 MW Captive Power Plant
- CPP # 2 - 60 MW Captive Power Plant
- WHRBPP - 12.5 MW Waste Heat Recovery Power Plant
- AFL plant - 8 m³ / hr.

DETAILS	PRODUCT	UNIT – I (5Stage)	UNIT –II(6stage)	UNIT – III(6Stage)	TOTAL MTPA
Present Capacity	Clinker	0.800	1.300	1.40	3.50
	Cement	0.792	1.108	2.00	3.90





ISO Certificates



QMS ISO 9001:2015

EMS ISO 14001:2015

OHSMS ISO 45001:2018

EnMS ISO 50001:2018

bsi. 

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that: **My Home Industries Private Limited**
9th Floor, Block No.3
My Home Hub
Madhapur
Hyderabad 500 081
Telangana
India

Holds Certificate No: **FM 677533**
and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

The Manufacture, Grinding, Supply and Export of Clinker, Cement, Ground Granulated Blast Furnace Slag and Generation of Power and Supply.

For and on behalf of BSI: 
Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2017-07-29 Effective Date: 2020-07-29
Latest Revision Date: 2020-07-28 Expiry Date: 2023-07-28

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Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that: **My Home Industries Private Limited**
Mellacheruvu Cement Works
Srinagar
Mellacheruvu (Village & Mandal)
Suryapet Dist. 508 246
Telangana
India

Holds Certificate No: **EMS 677446**
and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

Manufacture, Dispatch and Export of Clinker, Cement and Generation of Power and Supply.

For and on behalf of BSI: 
Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2017-08-14 Effective Date: 2020-08-14
Latest Revision Date: 2020-10-24 Expiry Date: 2023-08-13

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Certificate of Registration

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM - ISO 45001:2018

This is to certify that: **My Home Industries Private Limited**
Mellacheruvu Cement Works
Srinagar
Mellacheruvu (Village & Mandal)
Suryapet Dist. 508 246
Telangana
India

Holds Certificate No: **OHS 677447**
and operates an Occupational Health and Safety Management System which complies with the requirements of ISO 45001:2018 for the following scope:

Manufacture, Dispatch and Export of Clinker, Cement and Generation of Power and Supply.
(Previously certified to BS OHSAS 18001:2007 since 2017-08-14)

For and on behalf of BSI: 
Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2020-10-24 Effective Date: 2020-10-24
Latest Revision Date: 2020-10-24 Expiry Date: 2023-08-13

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Certificate of Registration

ENERGY MANAGEMENT SYSTEM - ISO 50001:2018

This is to certify that: **My Home Industries Private Limited**
Mellacheruvu Cement Works
Srinagar
Mellacheruvu (Village & Mandal)
Suryapet Dist. 508 246
Telangana
India

Holds Certificate No: **ENMS 689619**
and operates an Energy Management System which complies with the requirements of ISO 50001:2018 for the following scope:

The Manufacture, Supply and Export of Clinker & Cement by using Thermal and Electrical Energy, Generation and Supply of Power through Captive Power Plants using Coal Fired Boilers, Waste Heat Recovery, Solar Energy and Alternate Fuel.

For and on behalf of BSI: 
Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2021-04-10 Effective Date: 2021-04-10
Latest Revision Date: 2021-03-22 Expiry Date: 2024-04-09

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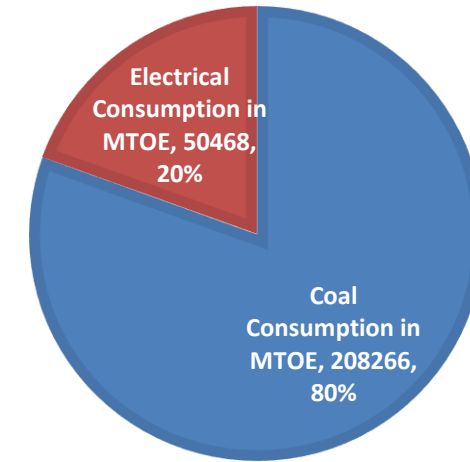
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■ Coal Consumption in MTOE

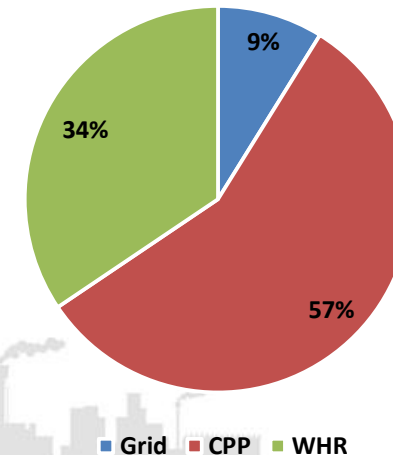
■ Electrical Consumption in MTOE

Coal Consumption in MTOE	208266
Electrical Consumption in MTOE	50468
Total consumption in MTOE	258735



% Of Power Sources

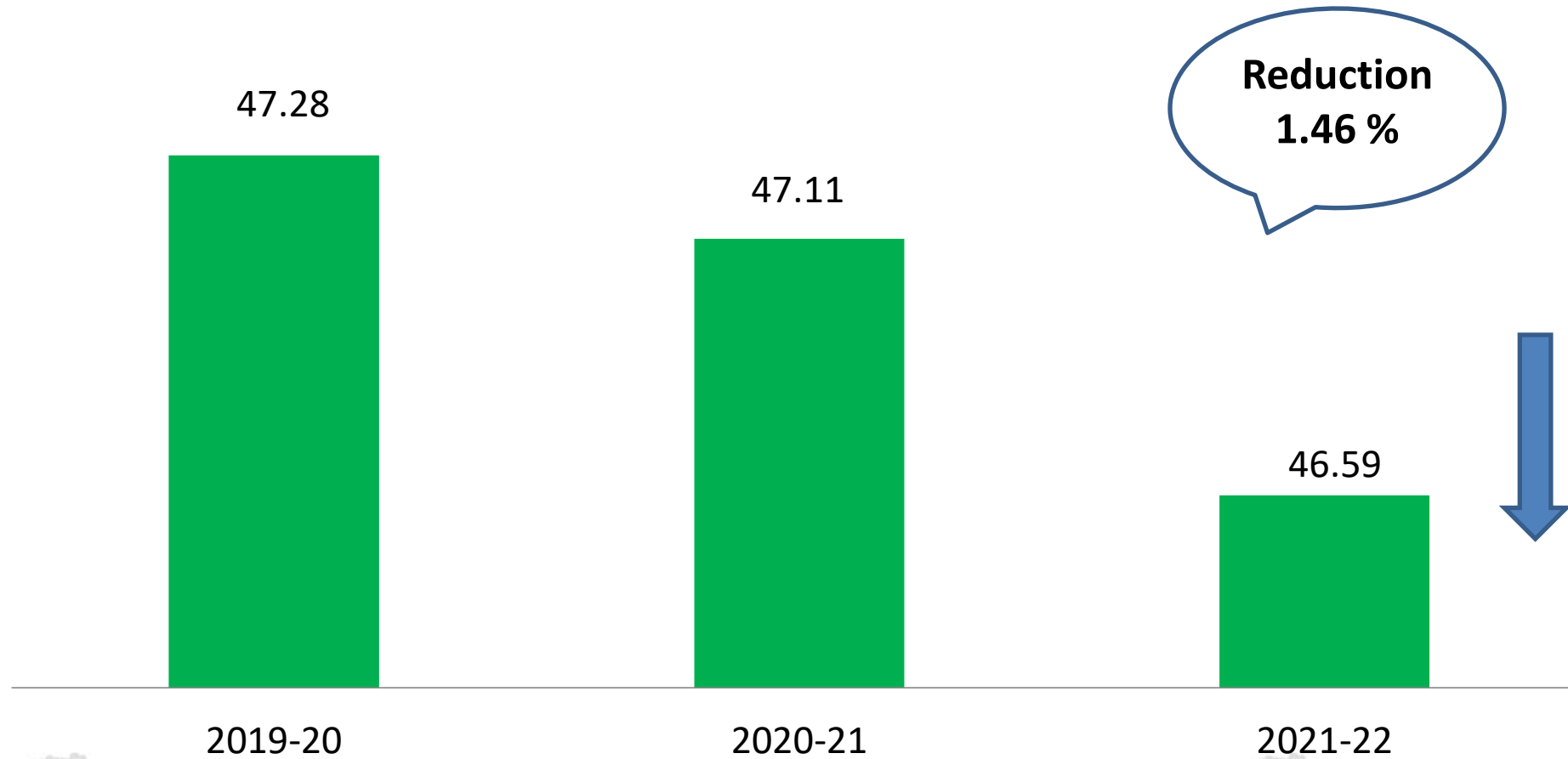
Source	In Lakhs Units	%
Grid	203	9
CPP	1301	57
WHR	790	34
Total	2294	100



■ Grid ■ CPP ■ WHR

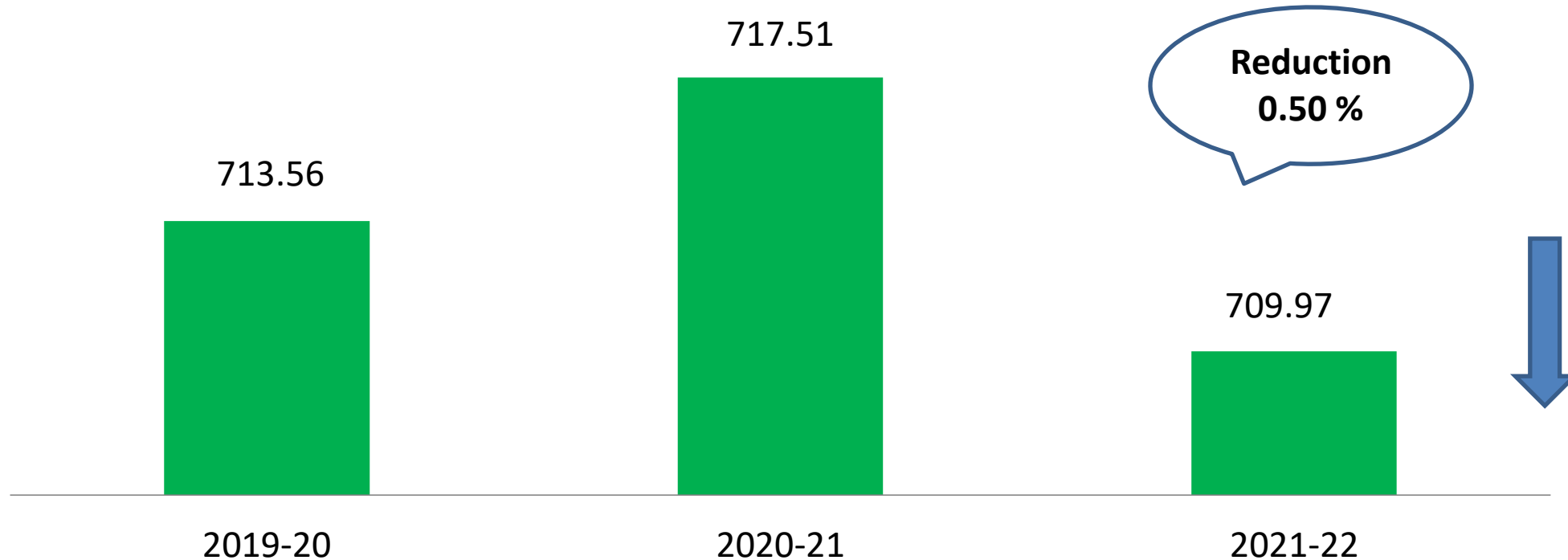
Energy Performance in Last 3 Years

Specific power consumption-(kWh/Ton Clinker)



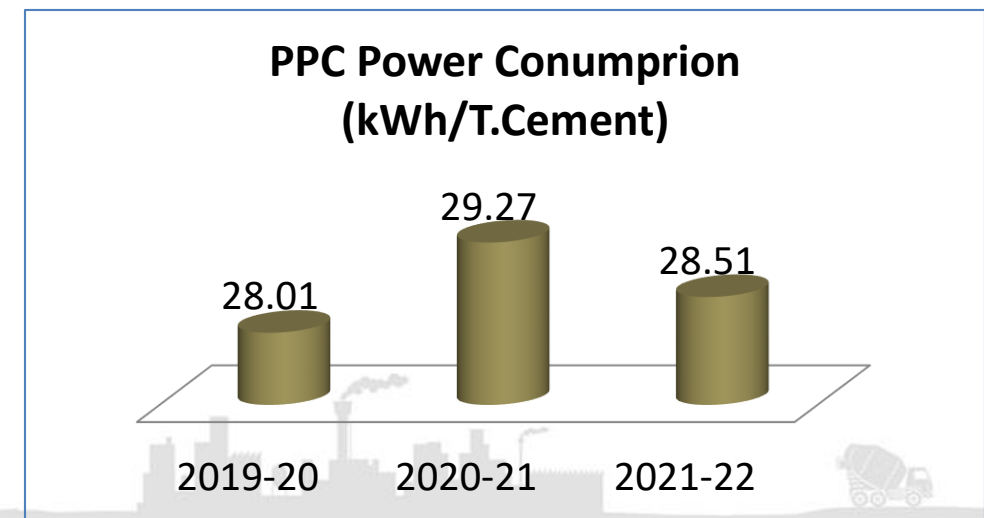
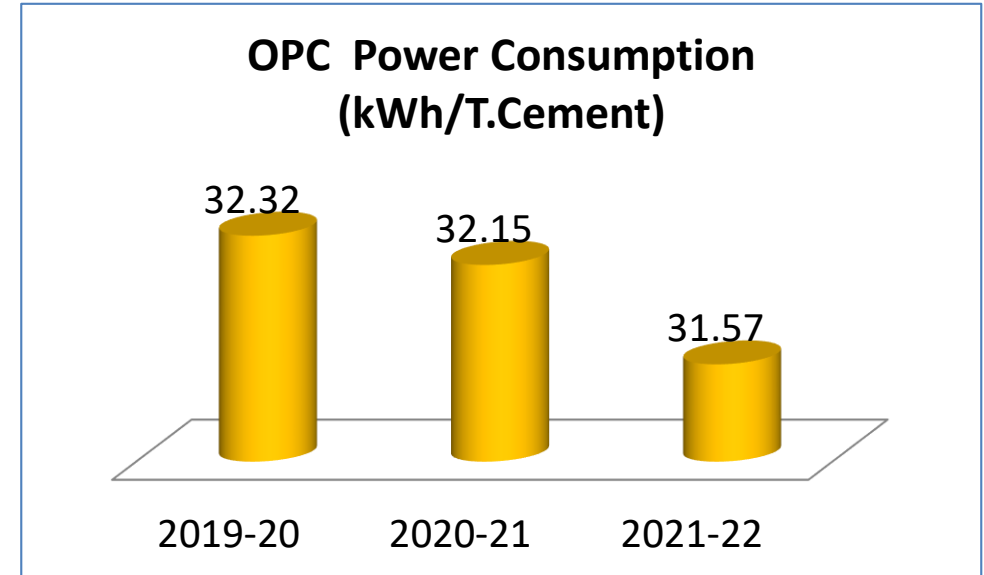
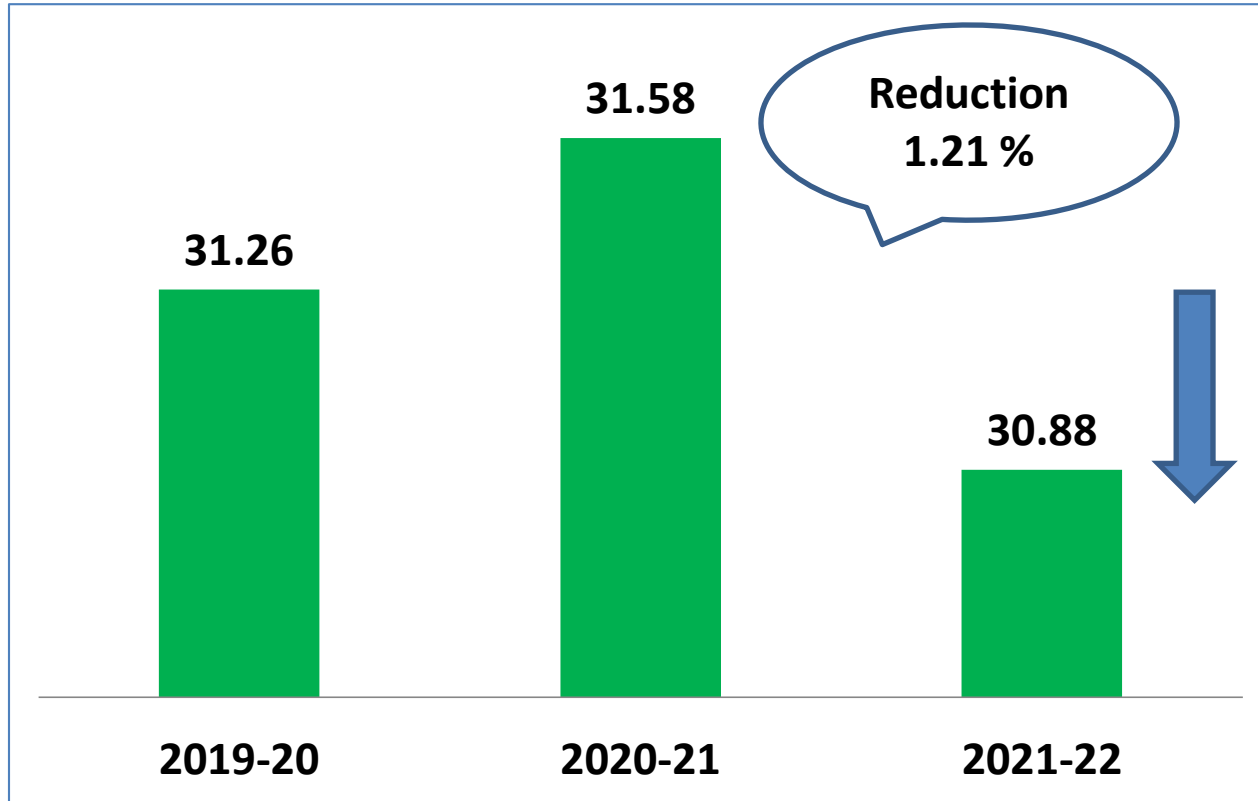
Energy Performance in Last 3 Years

Specific thermal consumption-(kCal/kg clinker)



Remark: In 2020-21 Sp.heat consumption increased due to Covid-19 pandemic

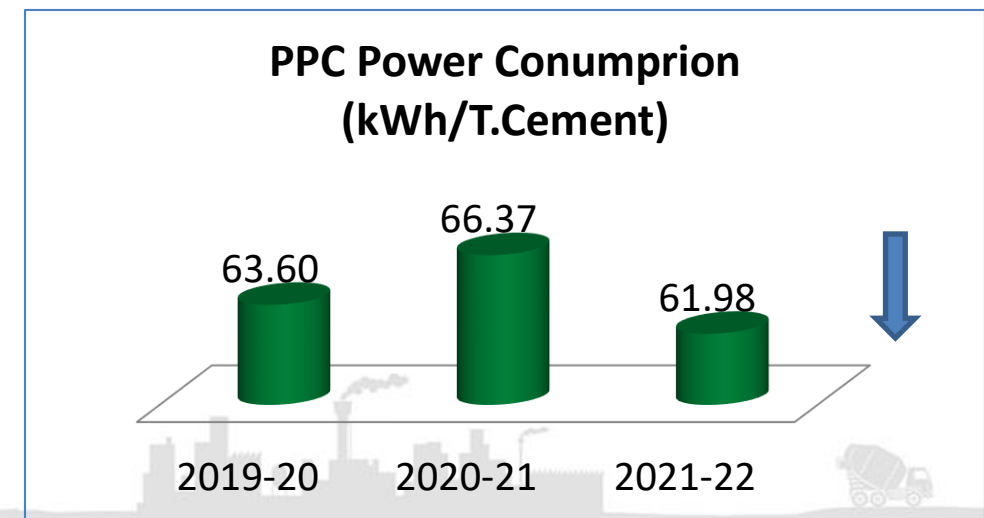
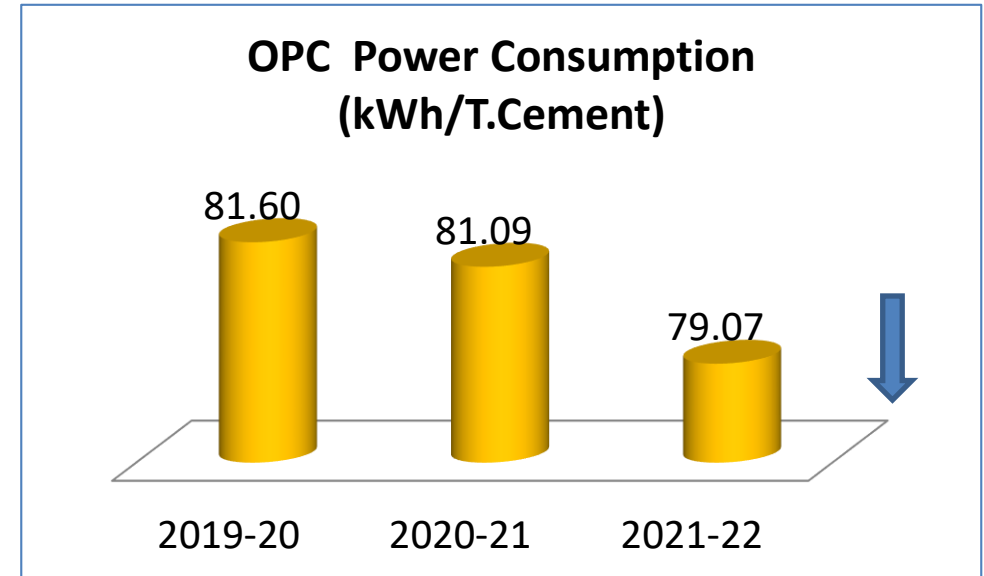
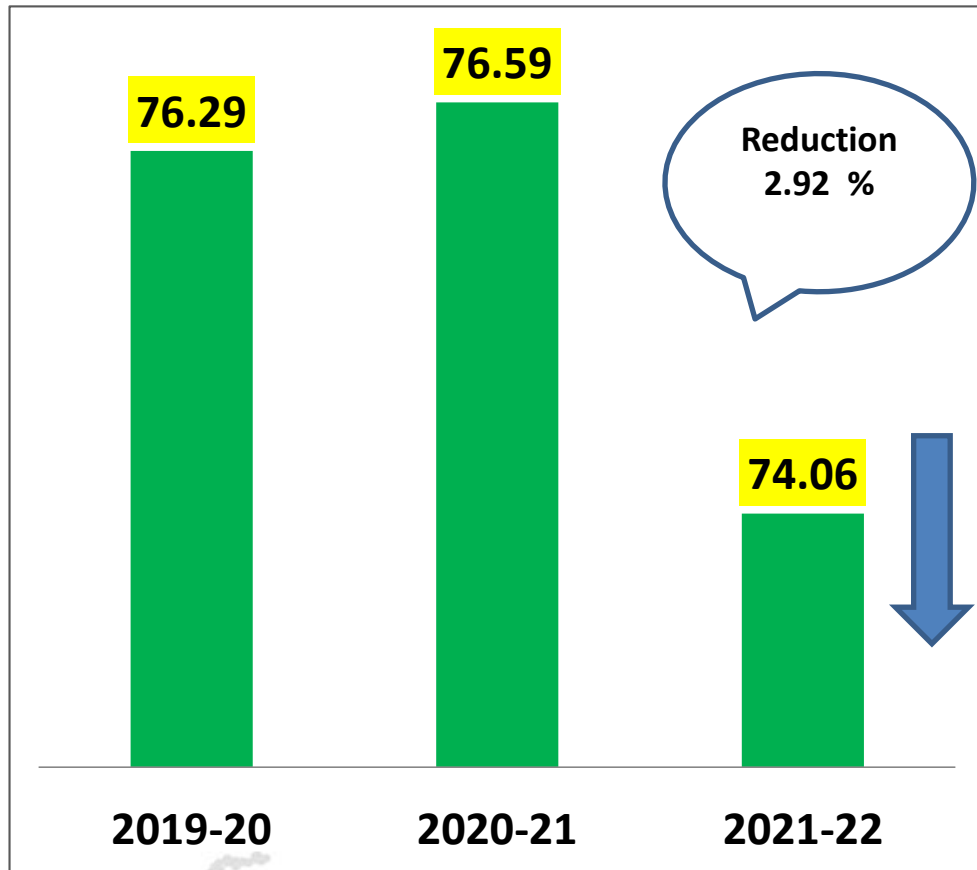
Cement grinding power-kWh/Ton of Cement



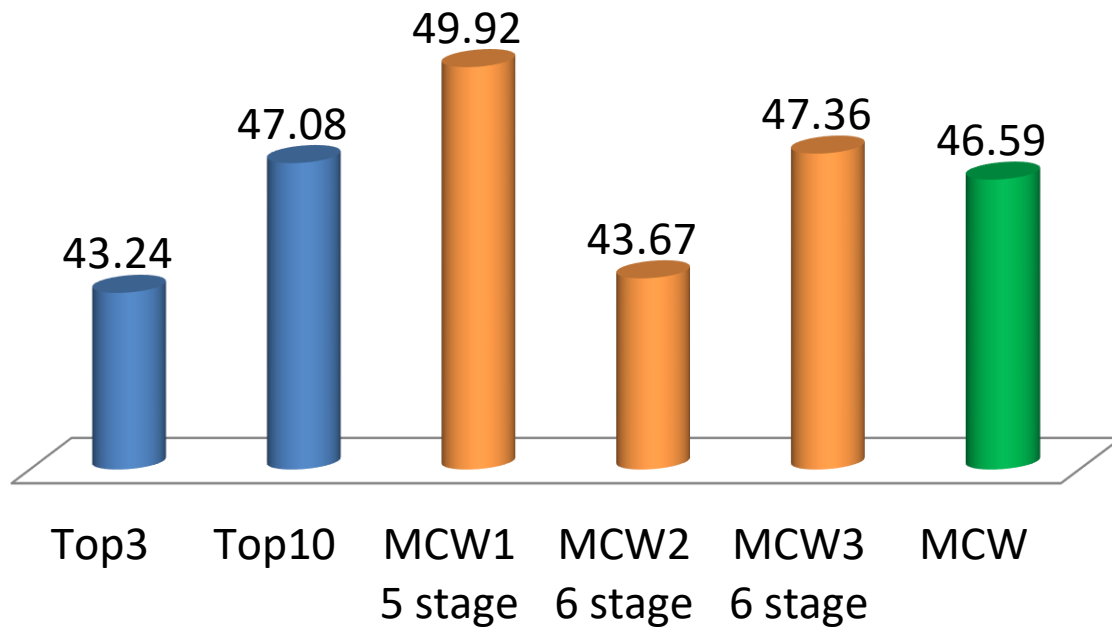
Remark: PPC grinding power increased due to Non availability of high Blaine flyash (From own CPP)

Energy Performance in Last 3 Years

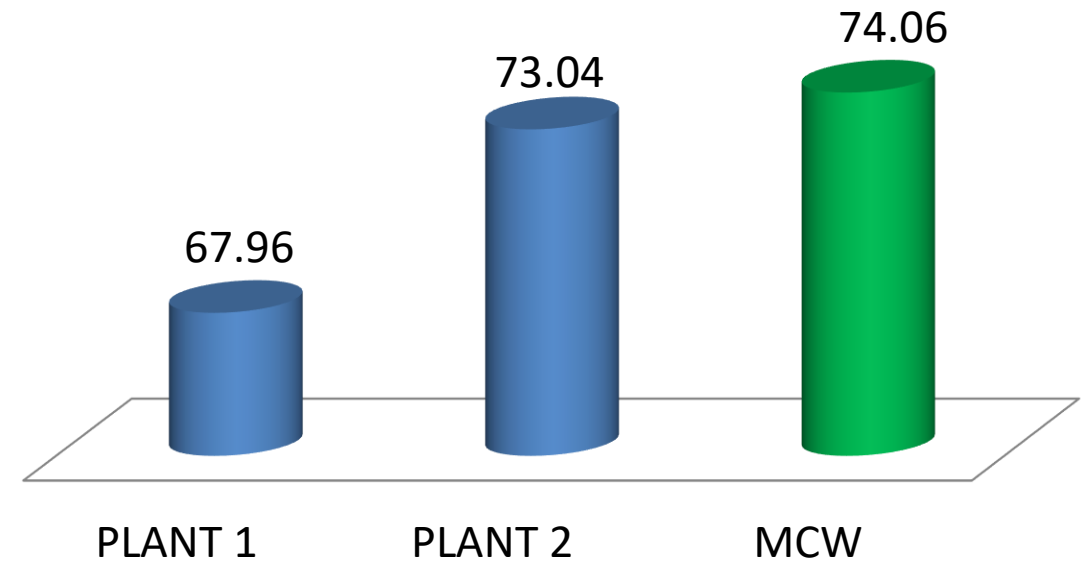
Total Sp. Power consumption-kWh/Ton of Cement



**Sp. power up to clinkerization
(kWh/Ton clinker)**



**Overall Electrical SEC
(kWh/Ton of cement)**



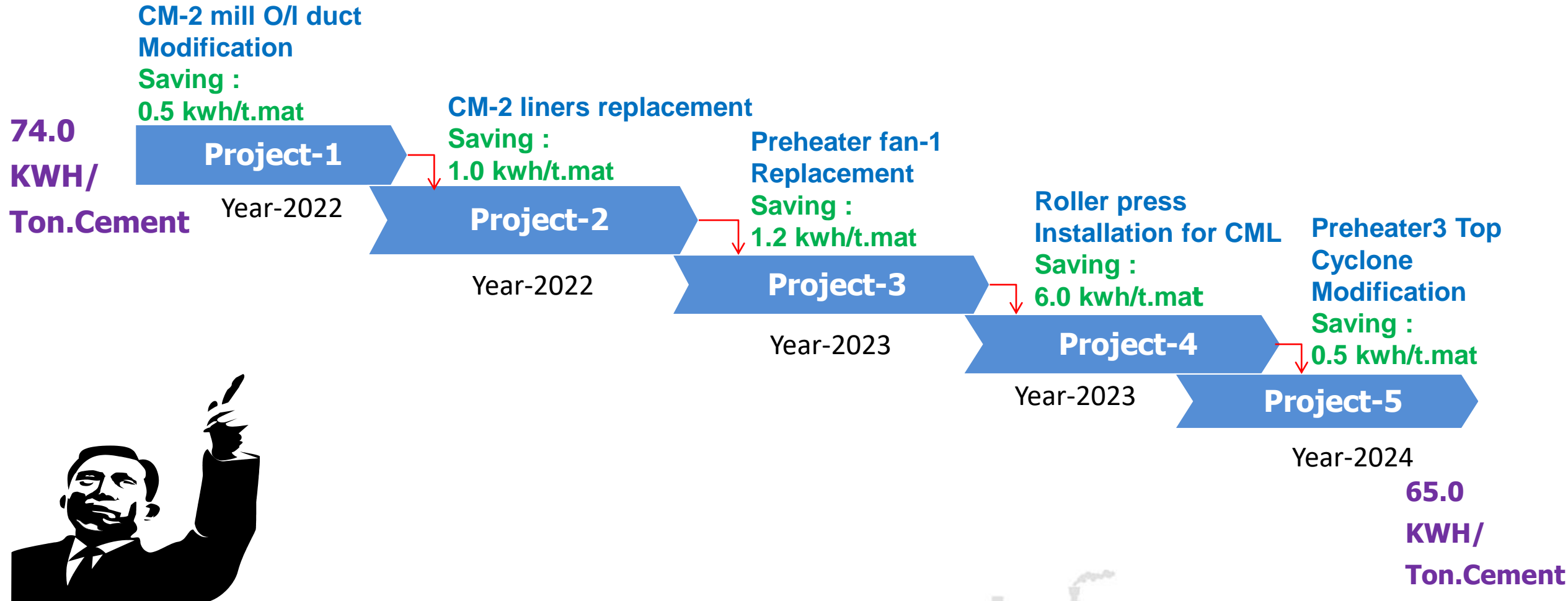
Reference : "CII Energy Benchmarking for the Indian Cement Industry Version 5.0 " manual



Road Map to achieve National bench mark

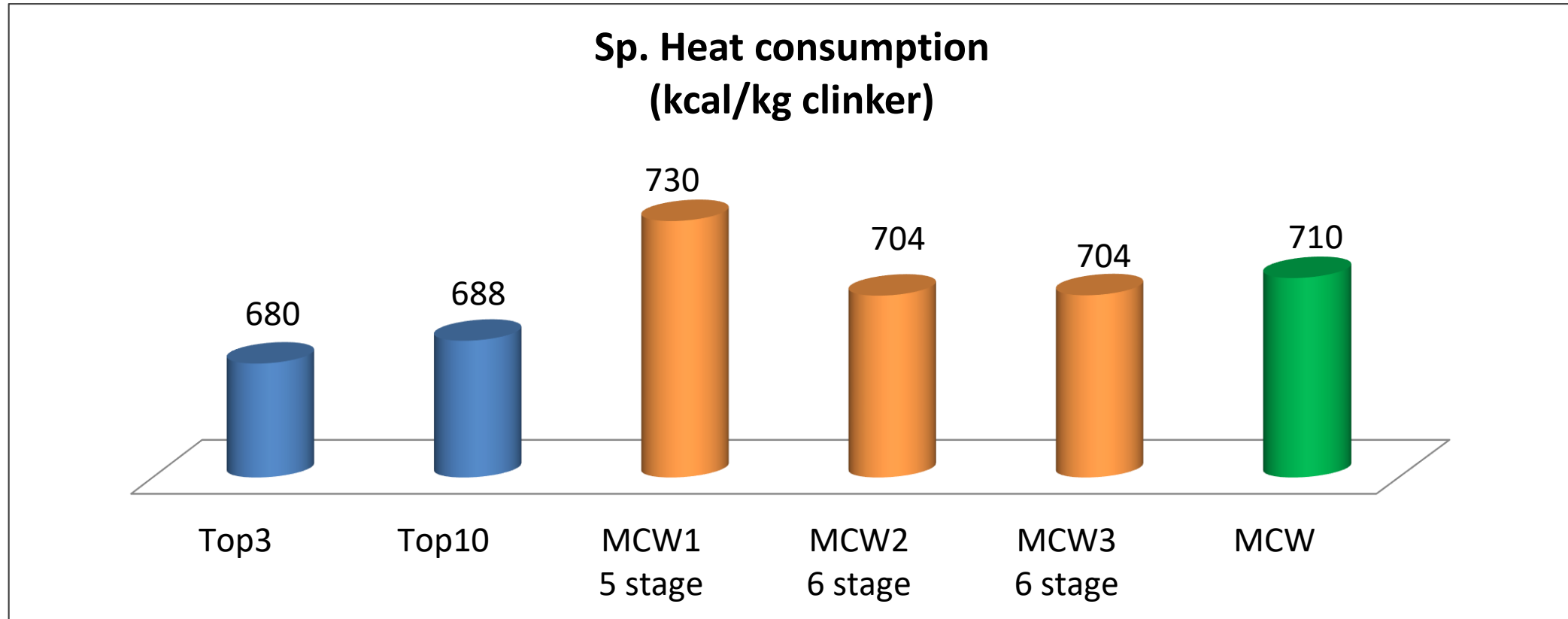


(From 74.0 to 65.0 KWH / Ton of Cement)



74.0

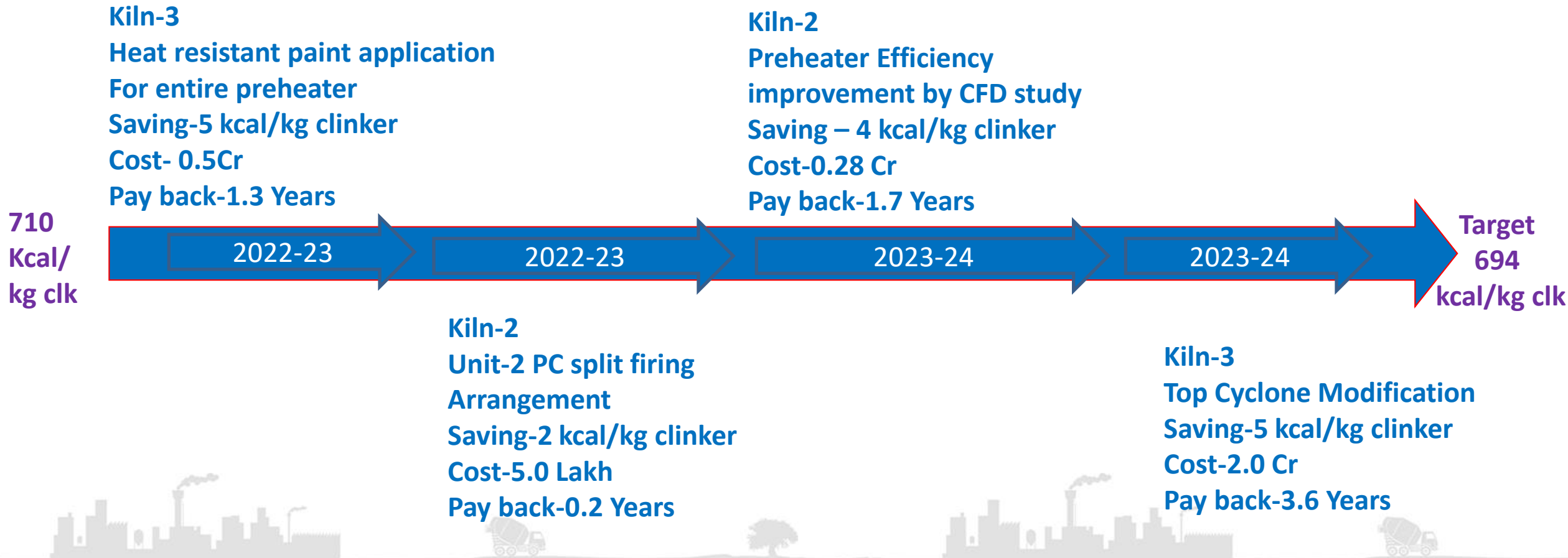
65.0



Reference : “CII Energy Benchmarking for the Indian Cement Industry Version 5.0 “ manual

Road Map to achieve National bench mark

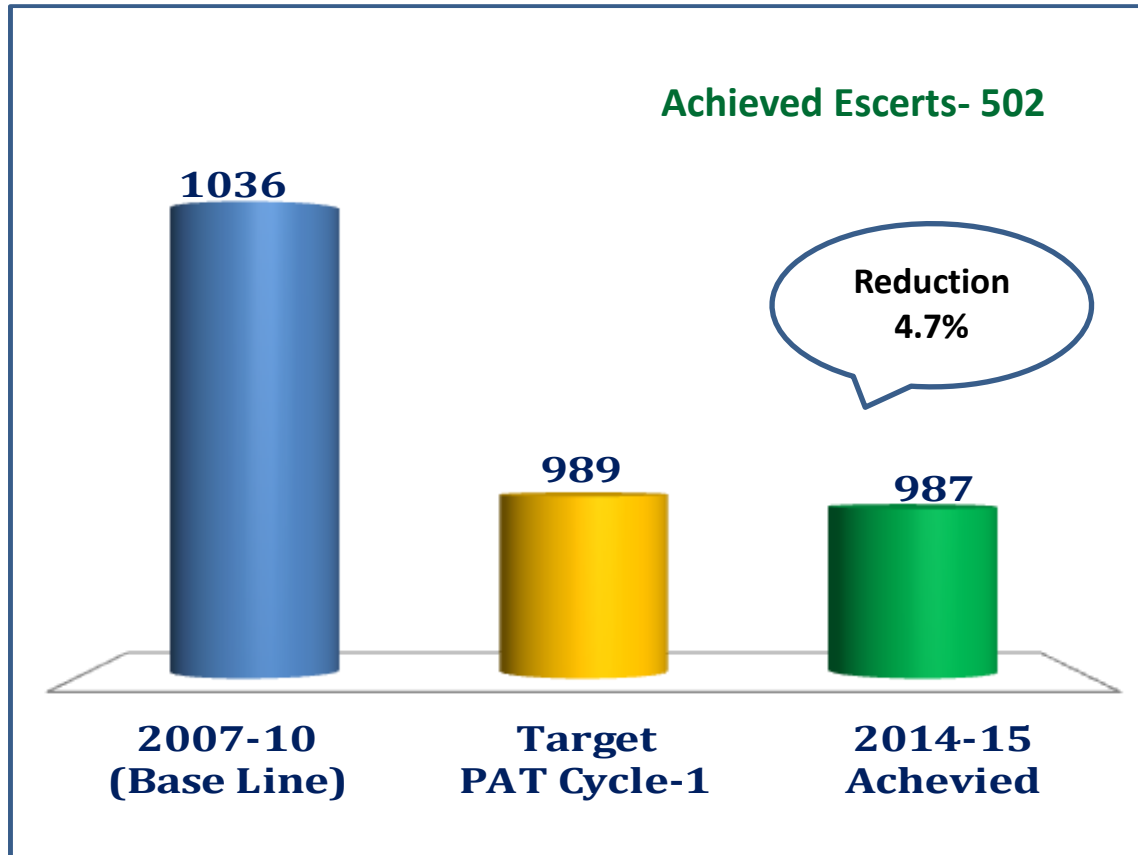
(From 710 to 694 kcal/kg.clinker)



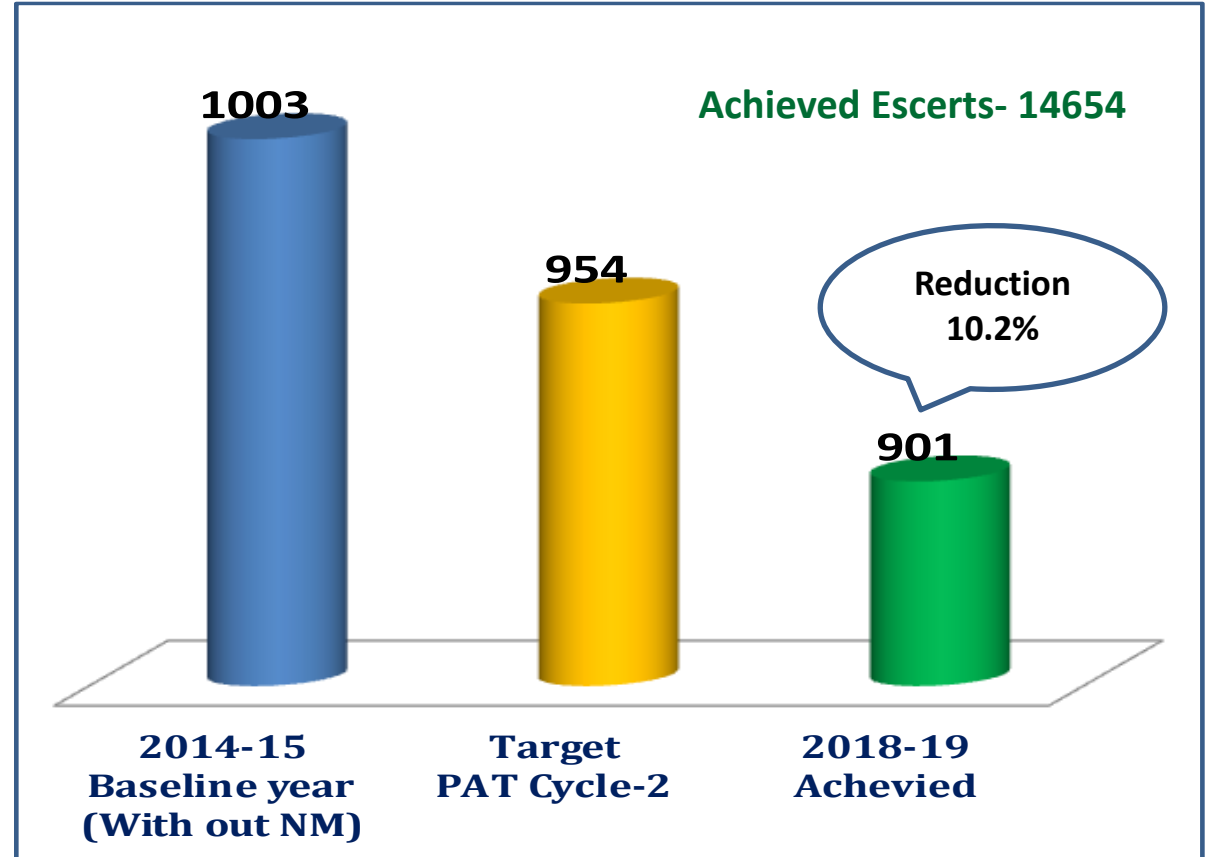
PAT

GTG SEC (K.Cal/Kg Equivalent of Cement)

PAT Cycle-1



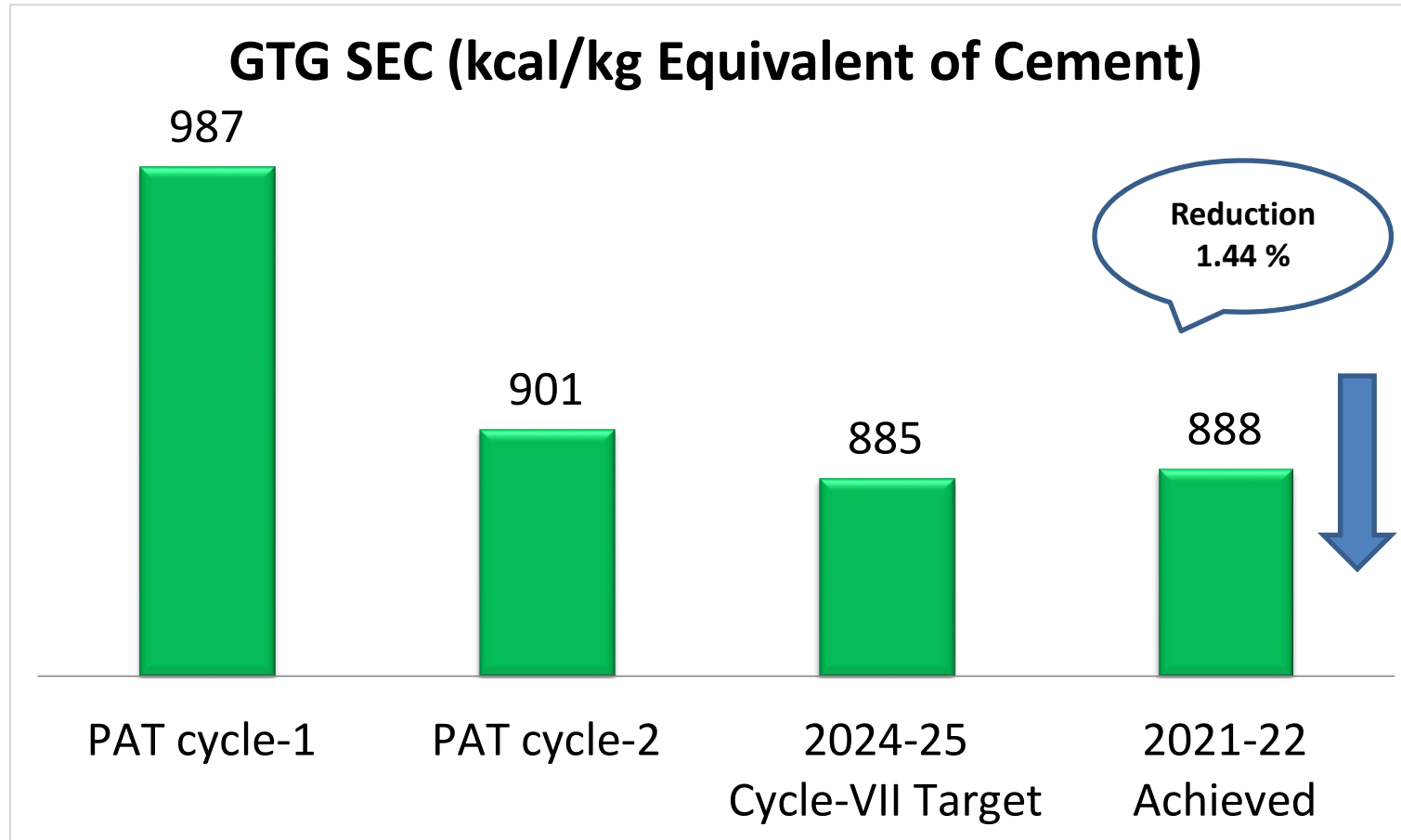
PAT Cycle-2



GTG SEC reduction due to Encon Projects, Installation of 12.5 MW WHR PP and Unit-3 Cooler modification

PAT CYCLE -VII

GTG specific energy consumption



Energy Saving projects implemented from 2019-22



Energy Saving projects implemented from 2019-22

Description	No of Energy Saving projects	Electrical Saving (Million kWh)	Thermal Saving (Million kcal)	Savings (INR Million)	Investment (INR Million)
FY 2019-20	21	4.44	11913	30.2	4.3
FY 2020-21	22	1.91	8052	18.3	2.7
FY 2021-22	21	2.07	6634	17.3	9.0
Total	65	8.42	26598	65.8	15.9

Major Projects done in last three years:

- low NOx pyro jet burner installation
- Installed low pressure compressor for fly ash unloading
- VFD's installed for KC/PC coal conveying blowers
- Cooler MFR hole size modification in unit-1 kiln to improve cooler efficiency
- Enlargement of all Major process fans inlet box to reduce fan power consumption
- Lowering of unit-1 top cyclone feed box by 1.5 mtrs

Sl. No	Title of Project	Annual Energy Savings (Mil.kWh/MT Coal)	Total Annual Savings (Rs. lakhs)	Investment Made (Rs Lakhs)	CO ₂ Reduction MT
Low Investment					
1	Cement mill-4 fly ash feeding point changed from mill inlet to mill outlet to increase the mill production and reduce the power consumption.	0.32	15.84	0	317
2	Installed grill at coal crusher inlet bypass chute to reduce coal crusher power consumption.	0.08	4.13	0	83
3	Cement mill-1A grinding media optimized to reduce mill shaft power.	0.15	7.50	0	150
4	Damper losses avoided in VRM-3 Vent fan	0.13	6.60	0	132
5	Unit-2 Cooler losses minimized by modification of last cooler fan bell mouth.	0/633	31.68	0.1	1272
Investment					
6	New jet air and swirl air blower installed with VFD at kiln-3 to reduce primary air consumption	0.198/693	44.55	18	1589
7	Packer -2 bag filter fan volume & speed optimized by arranging 55 kW VFD	0.075	3.75	0.3	75
8	Installed 5.5 kW ventilation module cartridge bag filter for Silo-6 bulk loading circuit operation to avoid running of 55 kW higher capacity bag filter fan.	0.002	0.08	5.0	2
9	Unit-1 Preheater fan inlet box modified to reduce fan power	0.17	8.32	1.0	166
10	Unit-2 Preheater fan inlet box modified to reduce fan power	0.36	17.82	1.0	356
11	Unit-1 VRM fan inlet box modified to reduce fan power	0.06	3.17	1.2	63

Sl. No	Title of Project	Annual Energy Savings (Mil.kWh/MT Coal)	Total Annual Savings (Rs. lakhs)	Investment Made (Rs Lakhs)	CO ₂ Reduction MT
12	Unit- 2 Cooler fans bell mouth modified to reduce fan power	0.12	5.94	0.5	119
13	Unit- 3 Cooler fans bell mouth modified to reduce fan power	0.10	4.75	0.4	95
14	Cement mill-4 separator seal gap reduced to improve the separator efficiency.	0.04	2.00	1.4	40
15	Cement mill-1A separator seal gap reduced to improve the separator efficiency.	0.05	2.50	2.4	50
16	Packer-4 & 5 bag cleaning device air slide blower's pipe line modified and one air slide blower (11 kW) stopped.	0.05	2.25	0.2	45
17	Packer-1 cement bulk loading air slide path blower lines modified and one air slide blower (3.7 kW) stopped.	0.02	0.75	0.2	15
18	Unit-1 Cooler MFR hole size increased to improve cooler efficiency	0.17/660	8.32	0.8	166
19	Unit-1 Cyclone-1 Discharge feed box position lowered by 1.5 Mtrs on 3 to 2 riser duct to improve preheater efficiency	0.36/396	17.82	1.0	356
20	In-House installation of Unit-2 Cooler mid top to improve the WHR power generation	0.06	3.17	1.2	63
21	Single command system for all mills circuit start up through which circuit idle time minimized & Power saved (i.e 65 Minutes saving on each startup of all mills)	0.003	3.03	0	2.8

Sl. No	Title of Project	Annual Energy Savings (Mil.kWh/MT Coal)	Total Annual Savings (Rs. lakhs)	Investment Made (Rs Lakhs)	CO ₂ Reduction MT
Low Investment					
1	Unit-2 coal mill booster fan damper losses minimized to improve mill performance	0.03	0.15	0.00	33
2	Utilized existing GX-7 air compressor in place of higher capacity GA-75 air Compressor for Silo-5 Bulk loading operation in packing plant.	0.03	0.15	0.00	33
3	VRM-1 belt reject material belt (Mill feeding belt to reject bin) idle running hours eliminated by providing interlock with metal detector	0.02	0.11	0.00	24
4	CM-2 grinding media optimization	0.16	0.71	0.00	158
5	Power saving through timer adjustment in CLM Mines Lighting tower.	0.01	0.06	0.00	13.14
Investment					
6	Unit-3 VRM false air minimized by arresting the leakages	0.26	1.16	0.04	257.4
7	Installation of mesh at VRM-3 inlet duct to reduce pressure drop	0.33	1.47	0.03	327
8	Installation VFD for Coal mill-1 booster fan to avoid damper losses	0.03	0.12	0.05	26
9	In-House modification of Unit-3 Preheater fan inlet box to reduce fan power consumption.	0.32	1.43	0.10	317
10	Unit-3 Cooler optimization by chamber sealing to improve cooler performance	0/874	5.24	0.05	1716
11	In-House modification of Unit-2 CA fan inlet box to reduce fan power	0.05	0.24	0.10	52.8

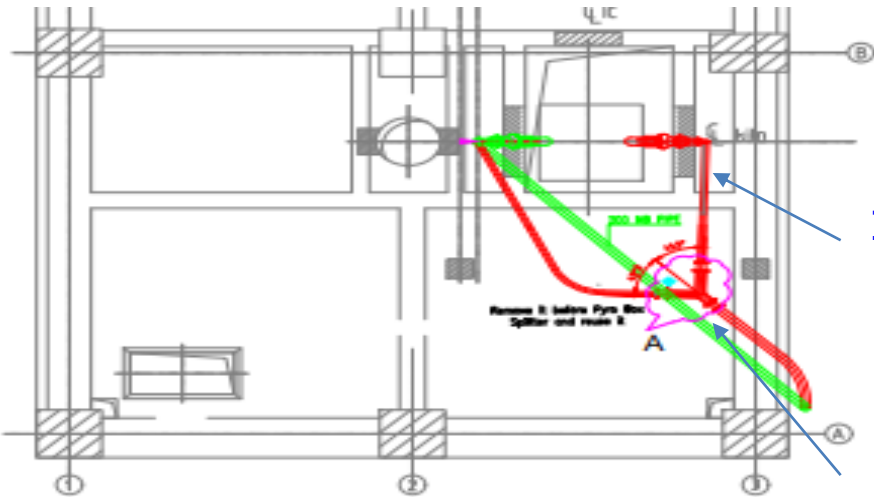
Sl. No	Title of Project	Annual Energy Savings (Mil.kWh/MT Coal)	Total Annual Savings (Rs. lakhs)	Investment Made (Rs Lakhs)	CO ₂ Reduction MT
12	Eliminated packer-5 Load cell bin aeration roots blower by providing airline tapping from bag cleaning device air slide blower for bin aeration.	0.03	0.12	0.05	26.4
13	VFD installed for Unit-2 PC blower in place positive displacement blower to reduce power consumption	0.12/312	2.406	0.26	118.8
14	LED 20W Tube Lights in place of 36 W Fluorescent Lamps for 210 no's	0.01	0.06	0.04	12.264
15	Replacement of 2x400w Hi-mast light with 1 x 350w LED Flood light fittings for 20 no's	0.03	0.11	0.28	25.29
16	Replacement of HPSV 70 W lamps with 35W LED fittings (400No's)	0.05	0.23	1.16	51.10
17	Unit-1 VRM water spray pump unit replaced form 11KW to 2.2 kW	0.01	0.03	0.04	5.98
18	VRM-3 Separator worn out static vanes replaced with in-house fabricated vanes to reduce the separator RPM.	0.34	1.51	0.01	337
19	Providing the distance piece between the two flaps at unit-3 cooler due to better sealing of air leakages from flap	425.00	2.55	0.05	835
20	Low capacity GA-45 air compressor installed and utilized at the time of one or two packers operation to reduce the compressor power consumption.	0.08	0.37	0.30	83
21	Install powerless bag diverter in place of geared motor at Pkr-5 belt conveyor.	0.00	0.02	0.05	4.22
22	Install powerless bag diverter inplace of geared motor at Pkr-7A belt conveyor.	0.00	0.02	0.05	4.22

Sl. No	Title of Project	Annual Energy Savings (Mil.kWh/MT Coal)	Total Annual Savings (Rs. lakhs)	Investment Made (Rs Lakhs)	CO ₂ Reduction MT
Low Investment					
1	Utilize the maximum capacity of belt while coal bypass circuit is in running by modifying the PLC logic.	0.26	1.15	0.00	256
2	Cooler fans bell mouth modification at unit-3 to reduce fan power	0.16	0.71	0.01	158
3	Unit-3, RABH fan and Cooler ESP fan dampers removed to avoid damper loses	0.20	0.89	0.02	198
4	False air arrested at VRM-2 to reduce the mill vent fan power	0.29	1.31	0.10	290
5	Unit-3, 6th Cyclone dip tube removed to reduce pressure drop	0.28	1.25	0.03	277
6	Unit-2, 6th Cyclone dip tube removed to reduce pressure drop	0.20	0.89	0.03	198
Investment		0.26	1.16	0.04	257.4
7	Cement mill-1 outlet mesh replaced with new one to improve mill ventilation	0.08	0.37	0.20	83
8	Energy savers installed for AC's to reduce AC power consumption	0.01	0.03	0.05	7
9	600 No's of conventional lights replaced with LED lights	0.07	0.33	1.00	73
10	VFD installed for Unit-2 coal SFM auxiliary bag filter for power reduction	0.04	0.16	0.10	36
11	Installed VFD for Cement Mill-2 mill discharge water spray pump	0.01	0.05	0.08	10

Sl. No	Title of Project	Annual Energy Savings (Mil.kWh/MT Coal)	Total Annual Savings (Rs. lakhs)	Investment Made (Rs Lakhs)	CO ₂ Reduction MT
12	Cooler chamber sealing improved at unit-3 cooler	0/449	2.69	0.05	901
13	False air arrester (Steel putty) applied at unit-1 preheater	0.07	0.30	0.13	67
14	Heat resistance aluminum paint applied for Unit-2 preheater	0/416	2.49	4.50	835
15	Unit-3 Raw meal silo aeration blower air optimized by pulley change	0.04	0.20	0.03	44
16	False air arrested at coal mill-3 to reduce the mill vent fan power	0.09	0.42	0.02	92
17	Optimization separator seal gap at coal mill-3 to improve mill performance	0.13	0.59	0.03	132
18	False air arrested at VRM-1 to reduce the mill vent fan power consumption	0.15	0.65	0.05	145
19	VRM-2 Mill water spray system pump replaced with 4 m ³ /hr. in place of 15 m ³ /hr.	0.01	0.03	0.02	6
20	Utilize the maximum capacity of belt while coal bypass circuit is in running by modifying the PLC logic.	0.26	1.15	0.00	256
21	Up graded KC & PC Solid Flow Meter control panels at Unit-1	0/264	1.58	1.50	530
22	Up graded Kiln feed Solid Flow Feeder at Unit-1	0/198	1.19	1.00	530

Innovative Project-1

Optimization of Unit-3 Preheater fan power



New Point

Old Point

FLOOR PLAN AT + 26.634 m

Observation:

Preheater fan power high due to abnormal coating formation in kiln raiser duct (Due to PC firing in raiser duct)

Action taken:

- Injection of fresh meal to inlet raiser duct to minimize the coating tendency (In-house design)
 - PC Coal Firing change from single point to double point
- This single point coal firing create heavy coating in one side of riser duct area . This affecting the kiln operating performance and productivity performance

Benefits Achieved:

- Kiln raiser duct pressure drop reduced by 30 mmwg
- PH fan power reduced from 8.4 kWh/T to 8.0 kWh/T

Reduction of Unit-2 Sp.heat consumption



Observation :

Unable to increase of PC coal feed rate with high ash coal effecting the kiln production and leads to increase of kiln sp.heat consumption.

Action taken:

Kiln-2 PC coal SFM screw gear box ratio changed from 25:1 to 20:1 to increase PC coal quantity.

Benefits Achieved:

- Increase of PC coal feed rate with low CV coals and minimize the PC temperature variations.
- Reduction of Sp. heat consumption by 2 kcal/kg clinker.
- Annual savings:29.11 Lakhs/Annum

VFD INSTALLED WITH PID FOR UNIT-2 COAL SFM AUXILIARY BAG FILTER



Observation :

- KC/PC coal SFM venting pressure variation during coal mill on/off operation affecting the KC/PC coal variations and thus temperature variations.

Action taken:

- Kiln-2 coal SFM Aux bag filter VFD installed and taken in to PID operation with coal SFM draught.

Benefits achieved:

- KC/PC Coal variations minimized and temperature variations reduced.
- Sp.heat consumption reduced by 3 kcal/kg clinker
- Power saving by 5 kW/hr due to damper kept at 100% open

Observation :

- High variation in mill discharge bucket elevator load due to frequent start/stops of water spray pump

Action taken:

- VFD installed for water spray pump and PID loop developed with mill discharge temperature

Benefits achieved:

- Mill discharge B/E load variation eliminated
- Power saving by 3 kW/hr
- Mill output rate increased from 118 to 121TPH(AVG)



New technology Installed Low NOx KHD Pyro jet burners

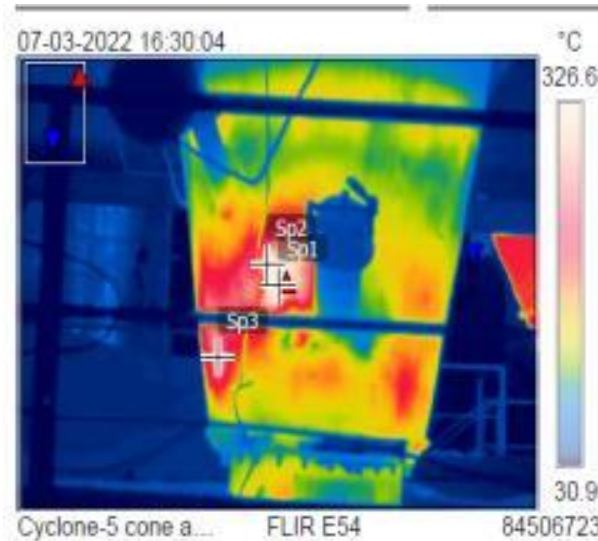
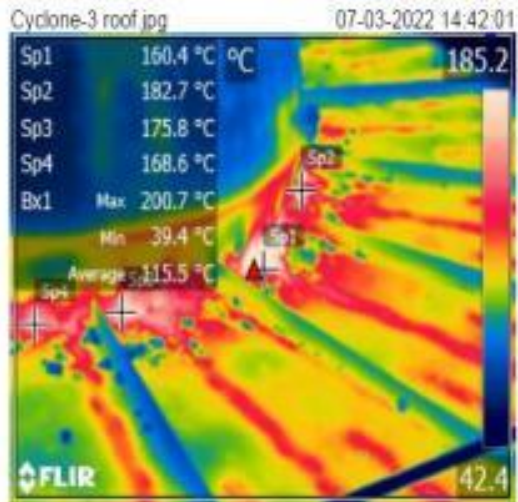


- Installed low NOx burners installed in all 3 kilns to reduced NOx emission at stack.
- Investment for the burners: Rs. 8.4 crore

Benefits achieved:

Description	UOM	Kiln-1	Kiln-2	Kiln-3
% of Primary air Reduction	%	6	6	4
Power Reduced	%	20	10	10
Kiln Sp. Heat Reduction	Kcal/kg clinker	5	5	3
Nox reduction at RABH stack	Mg/Nm3 @10% O2	150	200	150
Annual savings	Rs. Lakh/Annum	40.9	55.9	38.6

- ❖ We have the practice for conducting the Thermography of MCC feeders of Load centers and complete Pyro section including all Preheater cyclones, Riser ducts, feed pipes, Cooler and TAD area for knowing the exact inside Refractory condition and based on this Thermography report we plan for replacement and change of Refractory during annual shutdowns.



Best Practices – Innovation for on line Heat Balance

Heat Balance

HB.DCS

QC Raw Data

Heat Input	[kg/kg clinker]	[deg C]	Factor		
			[kcal/kg/d C]	[kcal/kg Clnkr]	[% Heat]
Sensible heat of Kiln Feed	1.57	78.0	0.22	26.45	3.71
Sensible heat of Kiln Feed Moisture	0.0020	78.0	1.00	0.16	0.02
Sensible heat of Fuel (Fine Coal)	0.153	70.0	0.289	3.1	0.44
Sensible heat of Moisture in Fuel	0.004	78.0	1.000	0.3	0.04
Sensible heat of Primary air to Kiln	0.014	60.0	0.238	0.2	0.03
Sensible heat of fuel Conveying Air to kiln & PC	0.060	60.0	0.238	0.9	0.12
Sensible heat of Cooling Air	2.293	30.0	0.238	16.1	2.29
Sensible heat of False air (From PH to cooler)	0.394	30.0	0.238	2.8	0.39
Specific heat required from Fuel (kcal/kgcl)				701	
Total Heat Input	4.46			763	

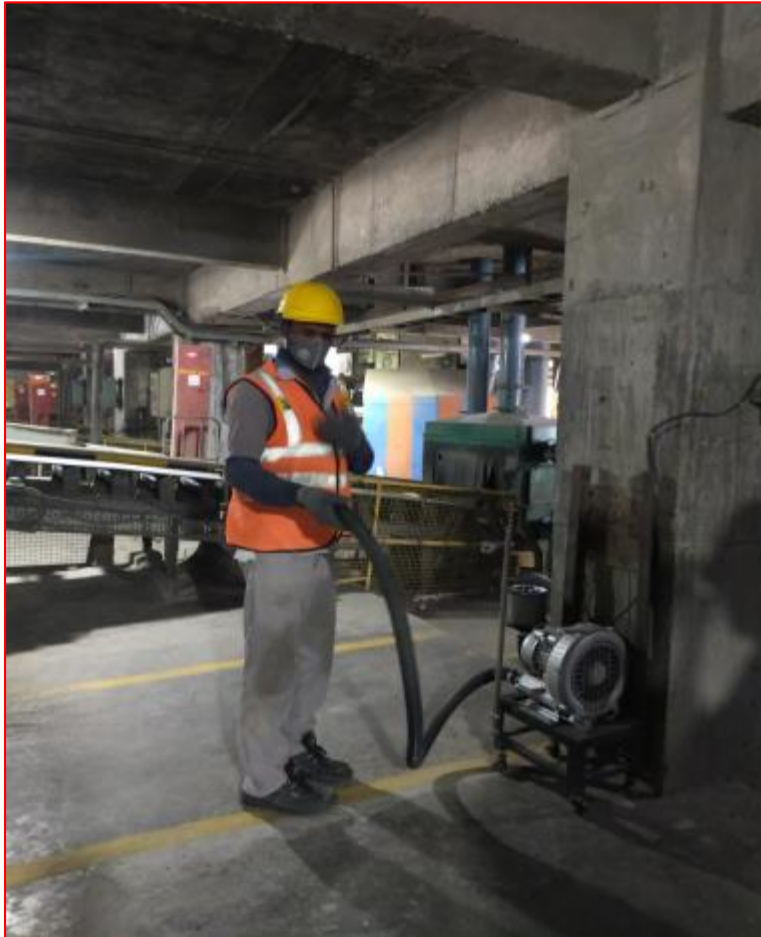
Heat Output	[kg/kg clinker]	[deg C]	[kcal/kg/d C]	[kcal/kg Clnkr]	[% Heat]
Heat of formation for Clinker (HOR)				421	55.86
Heat loss through Preheater Exhaust Gases	2.121	327.8	0.246	172	24.07
Heat loss through PH Return Dust	0.086	327.8	0.209	6	0.83
Heat loss through Cooler Exhaust Gas	1.096	320.0	0.238	84	11.77
Heat loss through Clinker	1.000	350.0	0.186	28	3.90
Heat loss for moisture Evaporation - Kiln Feed	0.002	327.8	0.444	1.48	0.21
Heat loss for moisture Evaporation - Fine Coal	0.004	327.8	0.444	2.88	0.37
Radiation losses through (PH,Kiln,TAD&CoI)				51	
Total Heat Output	4.33			764	

Online heat balance program developed through plant DCS system in units 1, 2 &3. This is innovative approach to do heat balance with majority of on line parameters.

Benefits:

- This will give facilitate on line heat balance which is unique. Conventional heat balance is much time taking exercise, which reduces impact of correction
- Quick and easy approach for day to day monitoring of heat loss.
- This will aid in improvement of plant operations.

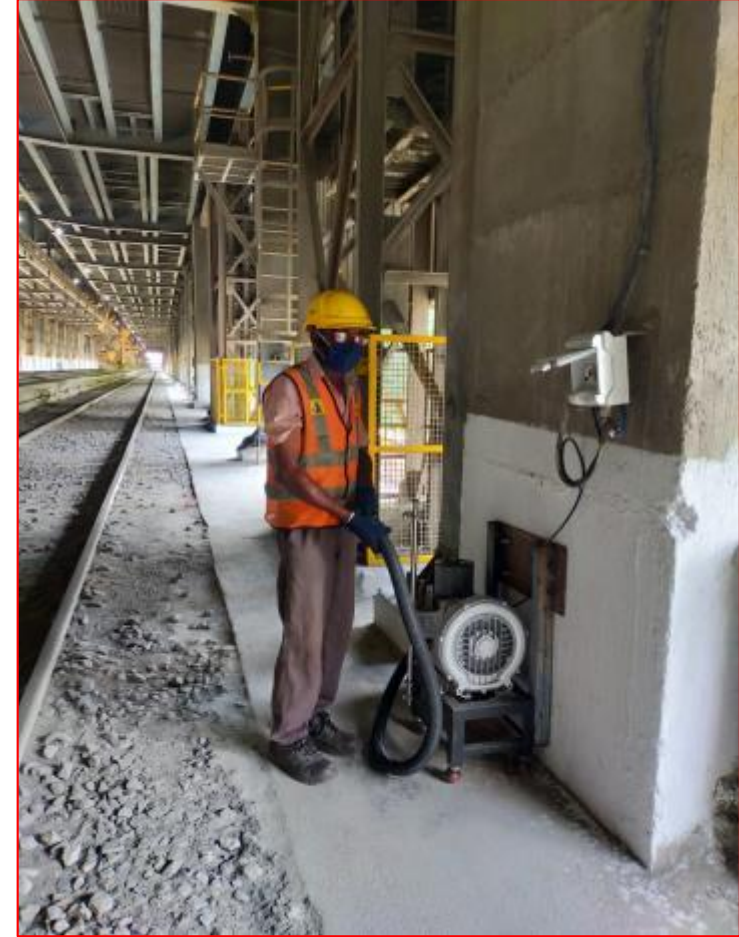
Best Practices – Low pressure blower for body cleaning to avoid compressor air usage



Packing Plant Unit 1&2 Area



Packing Plant Unit 3 Area

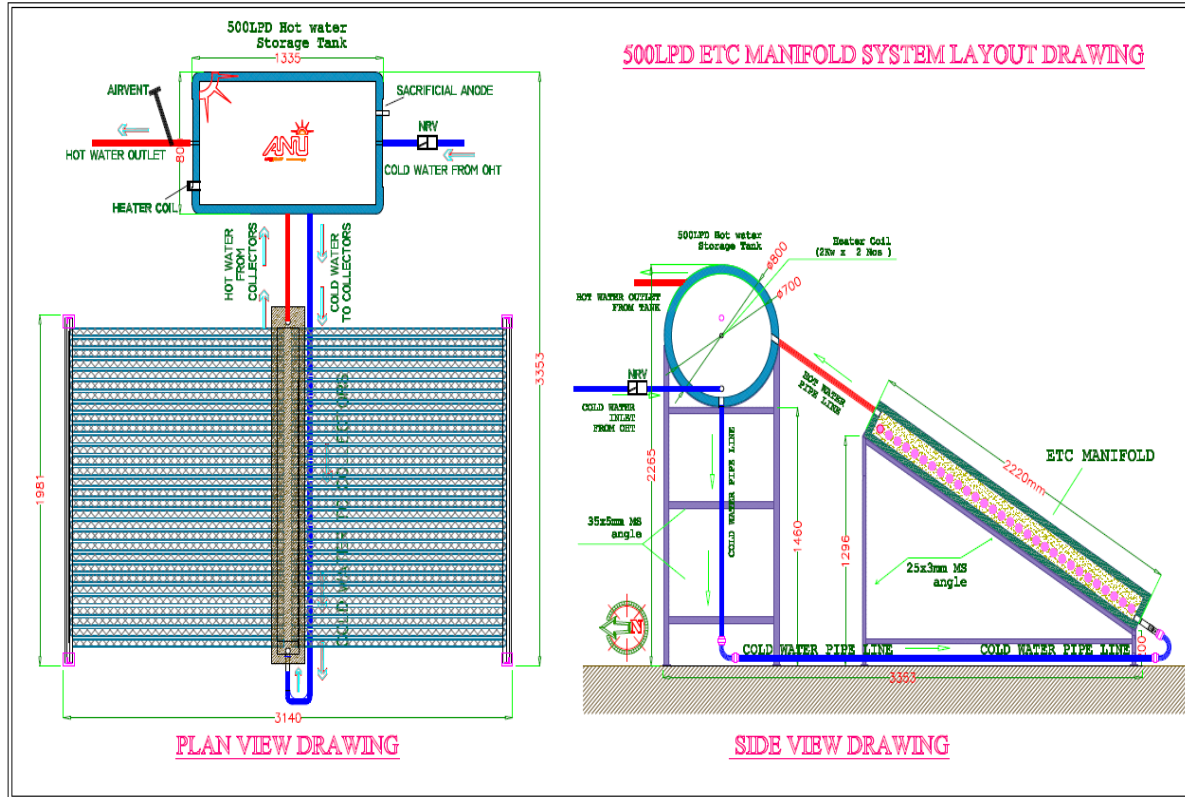


Wagon Loading Area



Technology	Type of Energy	Onsite/Offsite	Installed Capacity (MW)	Generation (million kWh)	% of overall electrical energy
Electrical	Solar	On site	0.012	0.013	11.75%
Electrical	Solar	Off Site	15.10	24.723	

2x 500 LPD ROOF TOP SOLAR HEATER AT GUEST HOUSE



Waste utilization and management

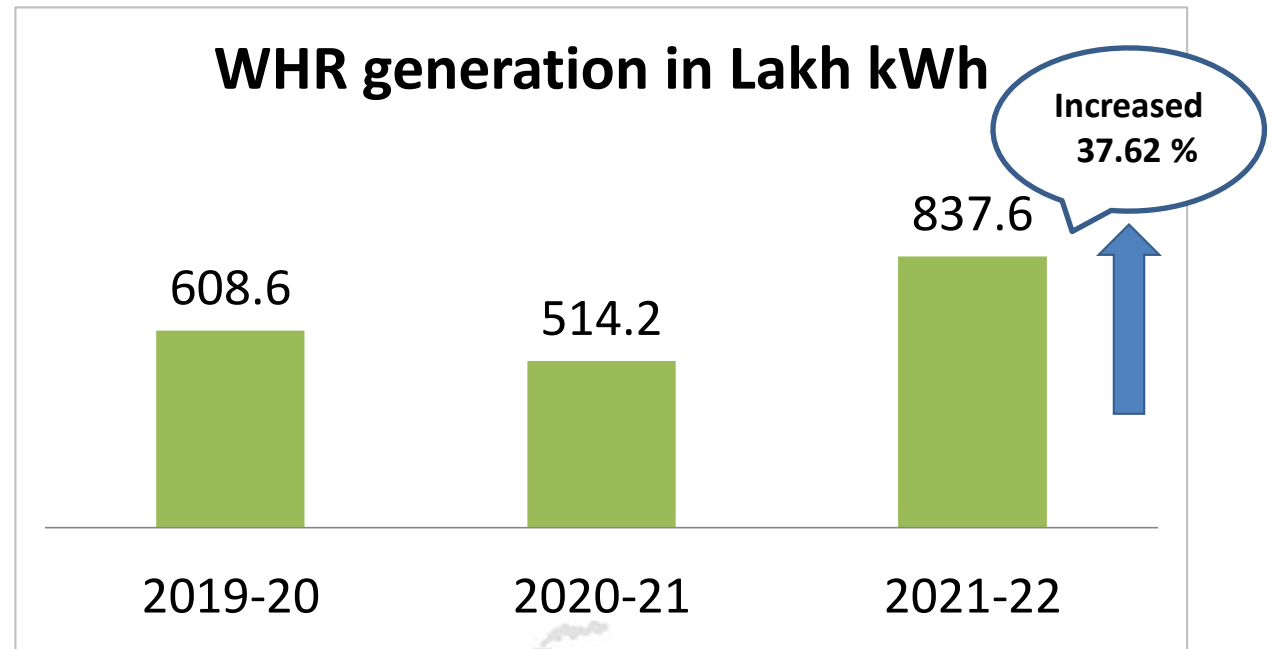
- Installed Waste Heat Recovery power plant (12.5MW) incorporated in process.
- Usage of alternative fuels (Liquid pharmaceutical waste) 4.0% (TSR)
- Usage of Pyrolysis oil (Plastic waste) for kiln light up in place of HSD oil.
- PPC New cement grade introduced as PPC HD+ cement with 20 % fly ash addition. (PPC production increased from 29.5 to 33.9 % in Last 3 years)
- Composting machine (500 Kgs Capacity) installed for colony Food waste and utilizing manure for green belt.



- ❖ MHIPL-MCW installed and commissioned 12.5MW Waste Heat Recovery System in 2017 with a capital expenditure of about Rs 126 crores and started utilizing waste heat from preheater and cooler of all the lines for power generation.
- ❖ Waste Heat Recovery System was installed by M/s LNVT/SINOMA Energy Conservation Ltd and achieving PLF of 85% an average.

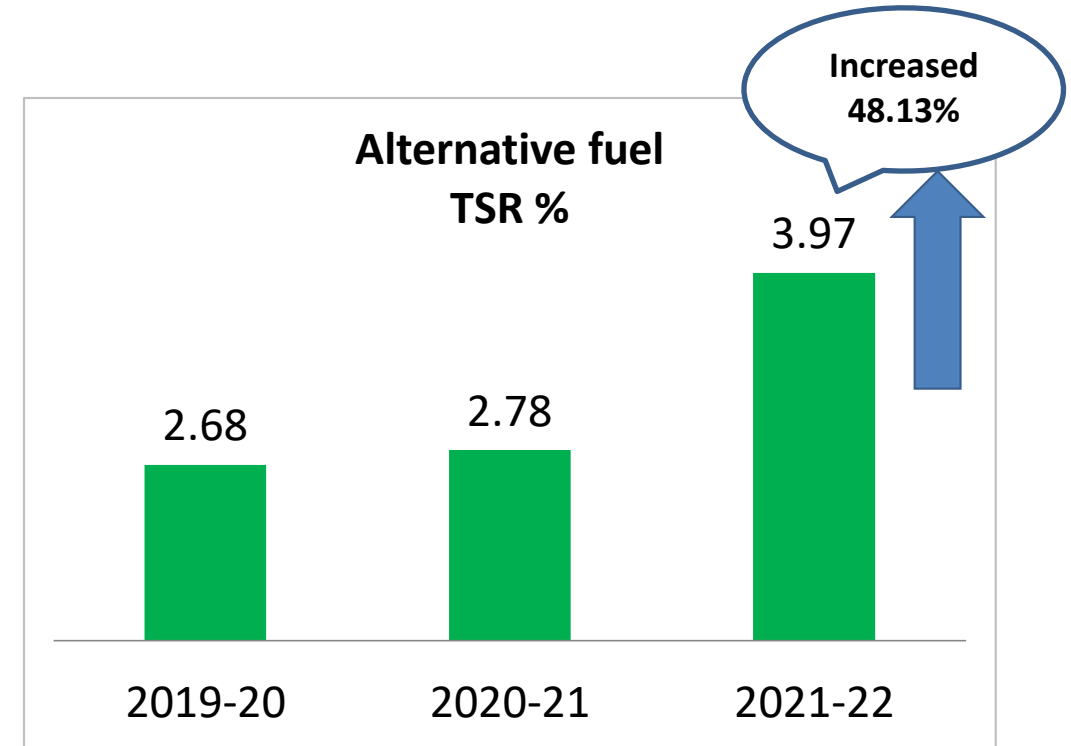


Turbine -Generator



CO2 Reduction in 2021-22: 83760 MT/Annum

Fool proof AFR firing system for firing hazardous waste in kilns with the technological support from FLSmidth, Denmark.



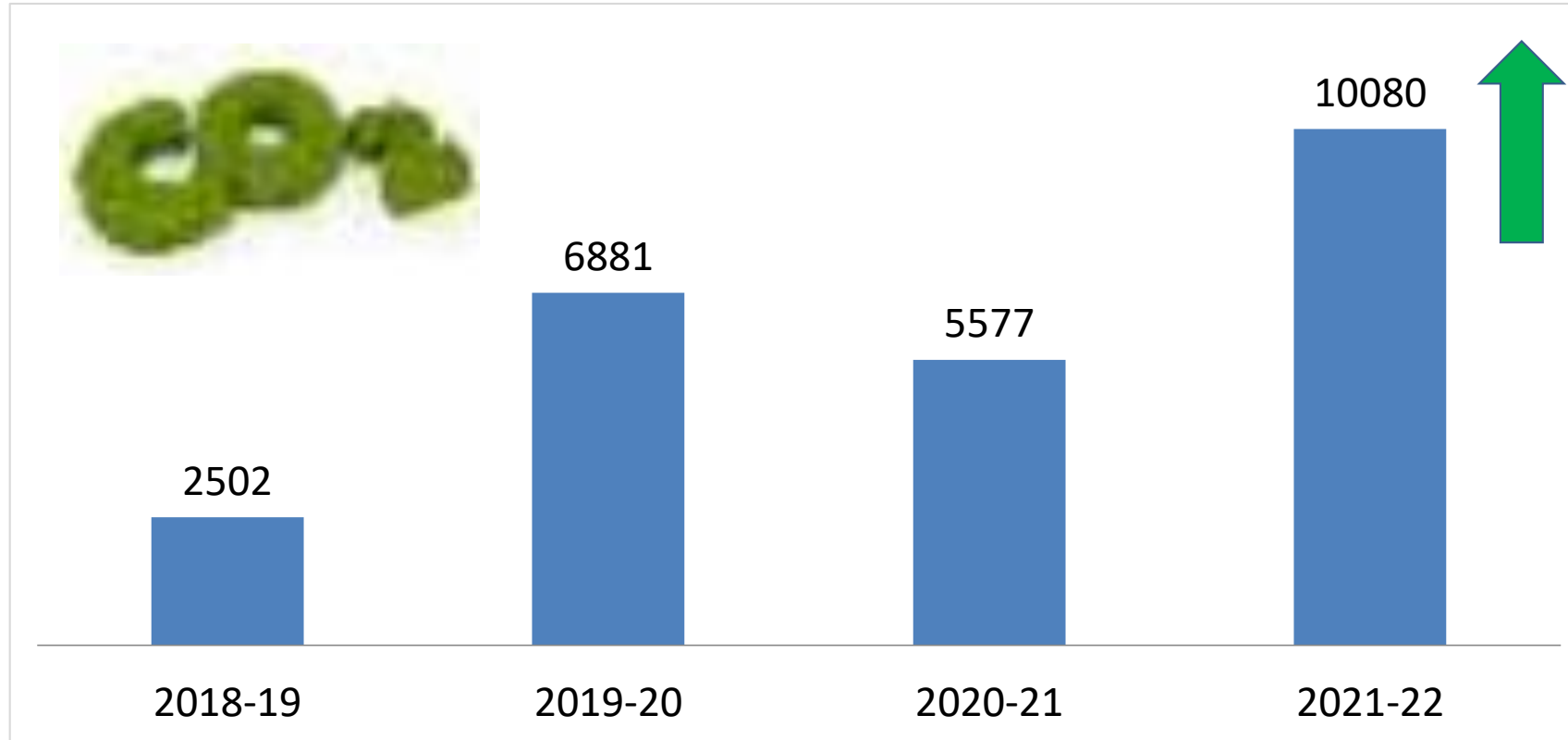
Action taken to improve the AFL consumption:

- ❖ Modified the PH cyclone dip tube with honey comb design to avoid the dip tube failure and increase the AFL Consumption & AFL solvent storage tank discharge pipe size increased from 2 inch to 4 inch.

Action Plan:

- ❖ Increase of AFR to 10.0%(TSR) with addition of solid AFR system.

Carbon Emission Reduction in Tons of Co2 with AFL Usage



GHG emissions reduced by 10080 MT CO₂ during the year 2021-22



- Substitute of Diesel firing Used for Kiln Heat up
- Pyrolysis oil generated from plastic waste
- By using this pyrolysis we are reducing CARBON FOOT PRINT.

DIESEL

- ✓ Calorific Value 10000 Kcal/Kg
- ✓ High NOx and CO emissions
- ✓ Does not meet green environment norms
- ✓ Net CO2 emissions = 3 tons per ton of Diesel fired

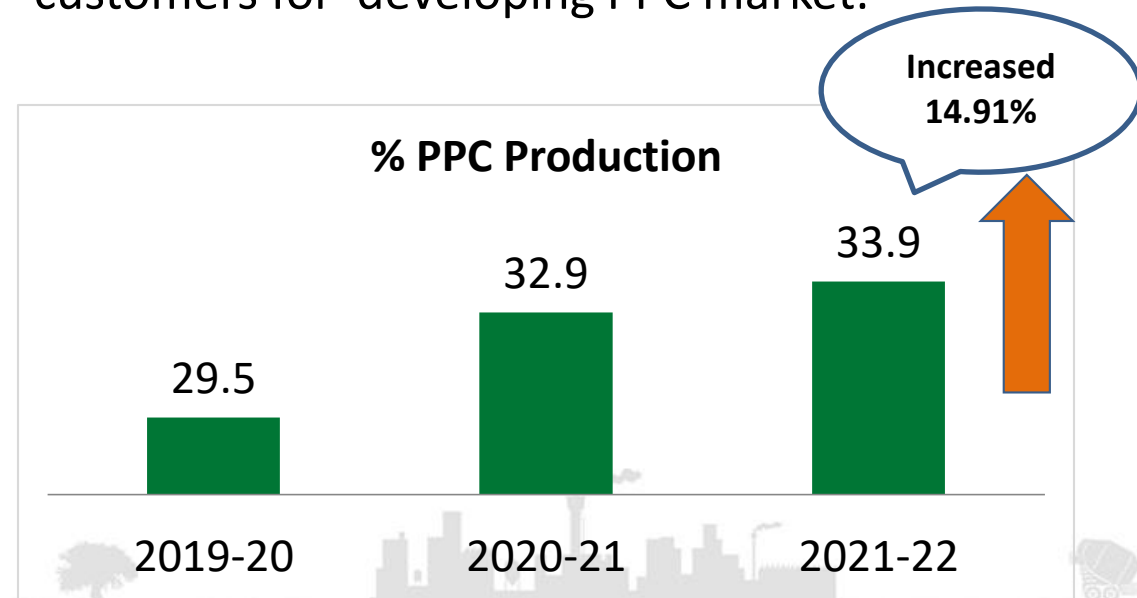
Pyrolysis oil

- ✓ Calorific Value 10250 Kcal/Kg
- ✓ Low NOx and CO emissions
- ✓ Meets green environment norms
- ✓ Net CO2 emissions = zero

PPC New Cement introduced as PPC HD+



- ❖ In PPC New cement grade introduced as **PPC HD+** cement with 20 % fly ash addition to increase the PPC production.
- ❖ Awareness programs conducted by marketing team to customers for developing PPC market.



Composting machine(500 Kgs) installed for colony Food waste



Commissioned in 2019
Feeding : 70% Wet waste & 30% Dry Waste as per machine standards.



INPUT

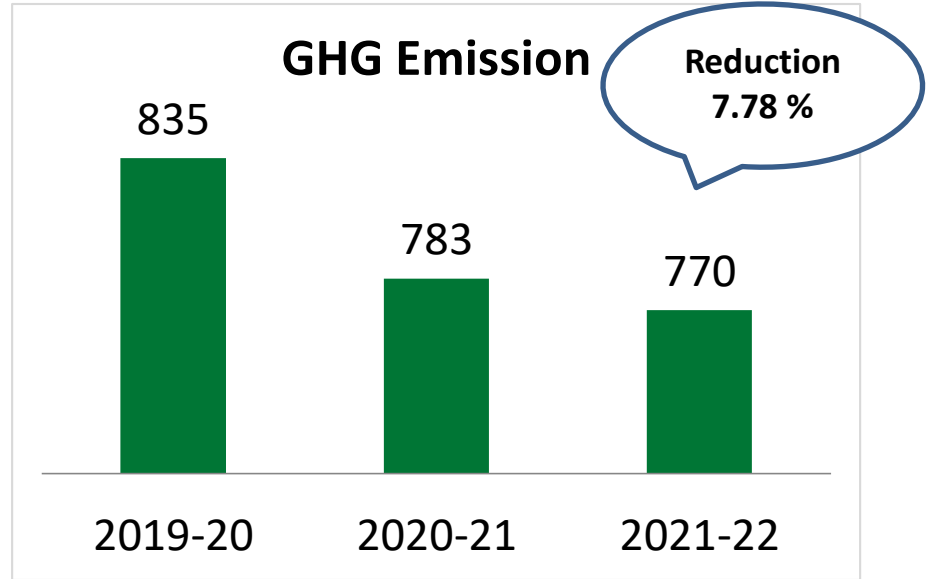
Eqpt: M/s. Enviroclean
Capacity : 500kgs/day

OUTPUT



GHG INVENTORISATION (Kg Co2/MT Cementitious product)

Year	Scope-1 emissions	Scope-2 emissions	Scope-3 emissions	Total
	Kg CO2/MT Cementitious product			
2019-20	826.96	2.04	5.77	835
2020-21	767.94	6.48	8.75	783
2021-22	756.07	5.12	8.60	770



Action Plan to achieve <600 kg Co2/MT Cementitious Product

- Increase the AFR utilization from 4.0 to 10.0%
- Installation roller press for cement mill
- Installation 5.0 MW solar plant.
- Increase of PPC product ratio from 34 to 40%



POLICY

AWARENESS & TRAINING



My Home Industries Private Limited



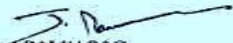
Regd. & Corp. Office: 9th Floor, Block-3, My Home Hub, Madhapur, Hyderabad-500 081 Ph: +91-40-6692 9696
 Fax: +91-40-2311 8000 Email: corp@myhomegroup.in Web: www.myhomeindustries.com CIN: U20942TG19BAPT004951

Green Supply Chain Policy

We at M/s. My Home Industries Pvt Ltd committed to establish industry bench mark in sustainable development. We shall ensure that sustainability is embedded across every function for products and services provided by us are environmental friendly and their impact on environment is minimal and contribute to continual improvement in environmental performance.

To deliver our commitment we shall focus on a philosophy "Reduce, Reuse and, Recycle" while working on the following objectives:

- We shall encourage the suppliers, transporters and service providers to ensure total compliance to applicable legal and other requirement which have significant impact on environmental performance.
- We shall give priority to the purchase of locally available suppliers and materials to minimize environmental impact.
- We shall give priority to the purchase of products which contain recycled materials rather than virgin materials to minimize environmental impact.
- We shall improve the procurement by giving preference to the sources which are less polluting and certified by environmental management systems like ISO 14001.
- Work in partnership with critical suppliers to achieve our common goal for continuous environmental performance improvement in terms energy management, water management, waste management, reduction of greenhouse gases and etc.,


 J. RAMU RAO,
 WHOLE TIME DIRECTOR

Date: 18.07.2016.

- ❖ 9 Critical vendors are identified out of total 2500 based on those material having maximum impact on environmental in supply chain.
- ❖ Visual aids-training for better understanding on green initiatives.
- ❖ Display of posters-on shop floor for better understanding and to create the awareness in every individual.
- ❖ Recognition letters shall be issued to the vendors after assessment on environmental performance by the end of March every Year as a part of encouragement.
- ❖ Emphasizing on rail/bulk transportation for inward and outward transportations to continual improvement of environment performance.



After completion of the training,

- ❑ M/s Neo Techniques, Kluber lubricants, Asco pneumatic and Shanti gears are replaced their existing conventional lighting system with LED lights considering environmental benefits and energy savings.

Savings Achieved by dealer:

Power saving -21545 kWh /Annum
CO₂ reduction -21.54Tons/Annum

- ❑ Padmaja Poly Packs Pvt Ltd recycled waste paper bags and Rain harvesting pits constructed for water conservation.

Savings Achieved by dealer:

Waste reduction -65 Tons/Annum
Water conserved-40 KL/Annum



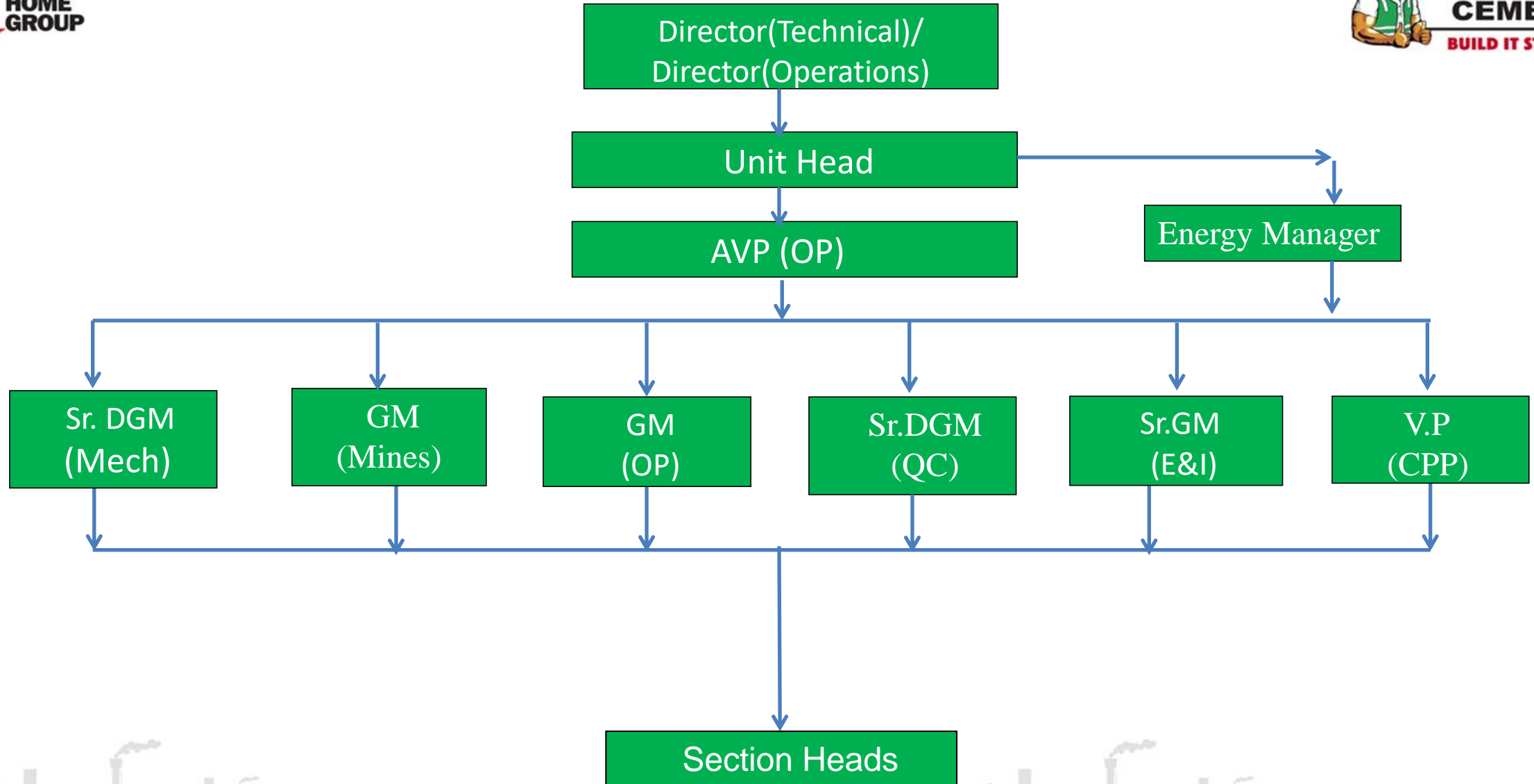
Best Practices implemented on energy front in Green Supply Chain

- ❖ Cement Bulk loading increased from 17 % to 37 %
- ❖ Procuring Energy efficient motors of IE3 & IE4.
- ❖ Installation LED lights in Phased manner.
- ❖ Regular training for drivers on fuel saving.
- ❖ GPR system provided for truck monitoring.

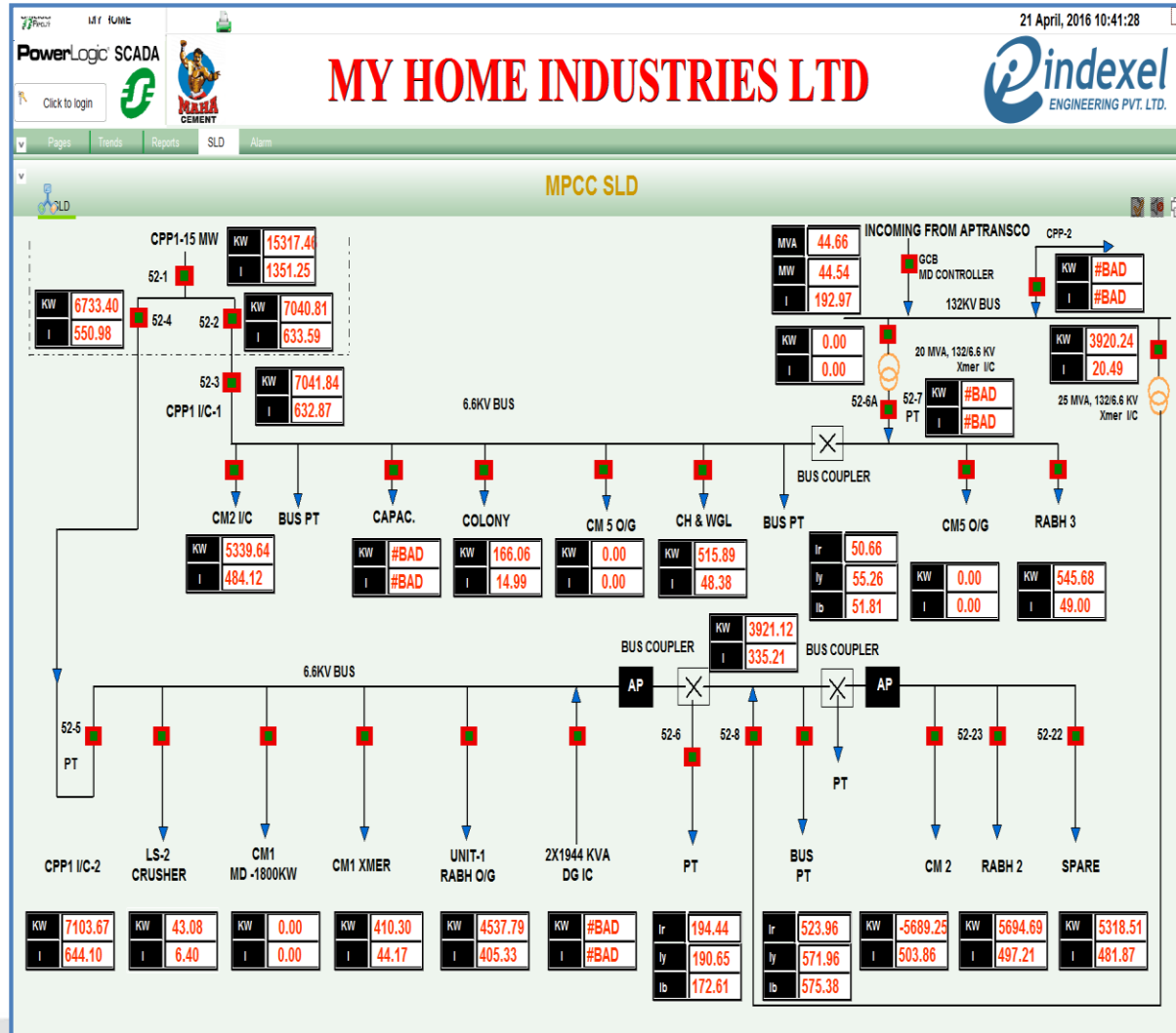




Energy Management Team



Online Energy Monitoring



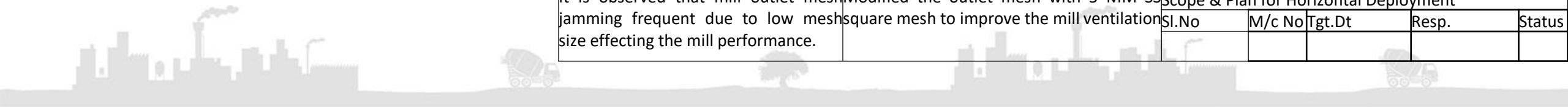
- ❖ Energy Management System is developed to monitor and control the consumption of various forms of energy through an effective energy management system
- ❖ Discussion on Variances against the target during Daily Coordination Meeting
- ❖ Monthly review by Energy Conservation cell
- ❖ Monthly review by Top Management for actions
- ❖ Energy Audits Once in 3 years by recognized External Agency

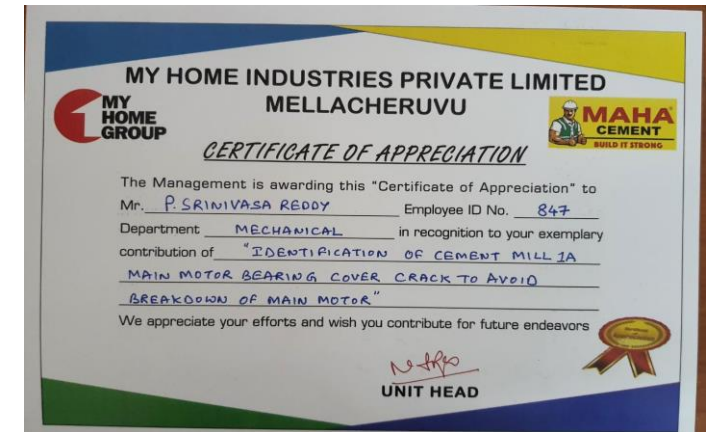
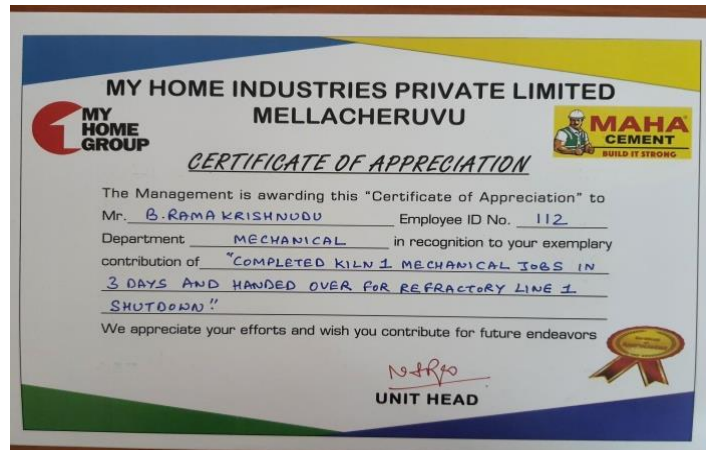
- ❖ Identifying the potential Energy saving equipment's /Areas by Plant Engineers.
- ❖ Categorized into No investment, Low investment and High investment.
- ❖ No / Low investment project Implementation - Immediately.
- ❖ High investment projects proposals – Put up for CAPEX approval.
- ❖ Review of project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



- ❖ Trainings for Employee/Contract work man
- ❖ Quality circle – 21 Circles
- ❖ Kaizen
- ❖ Knowledge share through live demos
- ❖ Energy conservation Day Celebrations
- ❖ Green Co Rating (Gold Rating)
- ❖ CSI Member company

My Home Industries Private Ltd		KAIZEN IDEA SHEET		Kaizen Start :	03.03.2021	
		Machine /Area Name:	Unit-1 Cement mill	Kaizen Finish:	15.04.2021	
				Target Date :	18.04.2021	
				Kaizen No :	Pro/08	
Kaizen Theme:		Idea:		Team Members (shri):		
To improve the Cement mill-1 performance		Cement mill-1 outlet mesh modified to improve the mill ventilation		MD.Sofi (Mech)		A.Surendra (Mech)
				J.Venkat kumar (Process)		
Before Improvement		After Improvement		Results & Benefits:		
				<ul style="list-style-type: none"> ▪ Mill production increased by 5TPH ▪ Mill Sp.power reduced by 0.2 kWh/Ton.Cement ▪ Annual saving in Rs:2.61 Lakhs 		
				IN TANGIBLE		
				Recurring <input checked="" type="checkbox"/>		One time
				Reversible		Irreversible
Analysis (Why):		Action Taken (Counter measure)		Scope & Plan for Horizontal Deployment		
It is observed that mill outlet mesh jamming frequent due to low mesh size effecting the mill performance.		Modified the outlet mesh with 5 MM SS square mesh to improve the mill ventilation		SI.No	M/c No	Tgt.Dt
				Resp.	Status	







Safety Park

Practical Training Center with live working demos



Internal Training



Why Why Analysis & Root Cause Analysis



Belt Operation



Basics of Lubrication & Open Gear Lubricants

Training for workmen's



- Creating platform for sharing of knowledge which takes to sustainable growth through optimum utilization of resources
- Understand the industry best values and implement the same in our organization
- Mesh installed at VRM-2 inlet to reduce the fan power consumption
- CFD study done in unit-1 preheater
- Low pressure compressors for fly ash unloading system



Green Co Gold Rating WON "GOLD AWARD" IN GREENCO SUMMIT



5 Star Rating Award(2020-21)



5 Star Rating Awards(2019-20)



Excellent Energy Efficient Unit from CII in 2019



Energy Efficient Unit from CII in 2020



Energy Efficient Unit from CII in 2021

MYHOME INDUSTRIES PRIVATE LIMITED, MELLACHERUVU

Energy Efficient Unit

Unique Achievements

- Increasing of Alternate fuel TSR to 2.8%
- PPC New cement grade introduced as PPC HD+ cement
- VRM specific power is 11.0U/T and it is best value in National Bench mark
- Cement Bulk Loading increased to 34%.
- PPC production increased to 32.9%

Unit head
N. Srinivasa Rao

22nd National Award for Excellence in Energy Management 2021

Confederation of Indian Industry



TELANGA STATE ENERGY CONSERVATION AWARD -2019



TELANGA STATE ENERGY CONSERVATION AWARD -2020



- Utilization of hazardous waste target to 10.0%(TSR)
- Reduction of Green House Gases emissions by Encon Projects
- Installation 5.0MW On site solar plant.
- Aim to participate in QC International convention





Thank You

MAHA CEMENT MY HOME INDUSTRIES PRIVATE LIMITED
Mellacheruvu Cement Works

PLANT LAYOUT AND EMERGENCY EVACUATION DETAILS

EMERGENCY ASSEMBLY POINTS

1. MAIN GATE
2. MECHANICAL WORK SHOP
3. WICKET GATE
4. CPP 1
5. CPP 2

Code for Emergency Alarm :
Three intermittent sirens of emergency siren will be blown for 2 minutes.

Code for All Clear Siren :
When incident is controlled and situation becomes normal, a continuous wailing Siren blown for 2 minutes.

Incase of Emergency:
Any person noticing a fire in a plant area has to shout "Fire Fire Fire" or if any person injured and inform section supervisor. The section supervisor will decide the emergency and inform ECC over Phone 1111 or 6309909090. If the section supervisor is at far distance the person noticing a fire has to declare the situation as emergency and inform 1111 or 6309909090. ECC shift in-charge will inform all key personnel.

EMERGENCY CONTACT NUMBER
MOBILE : 6309909090 LAND LINE : 1111