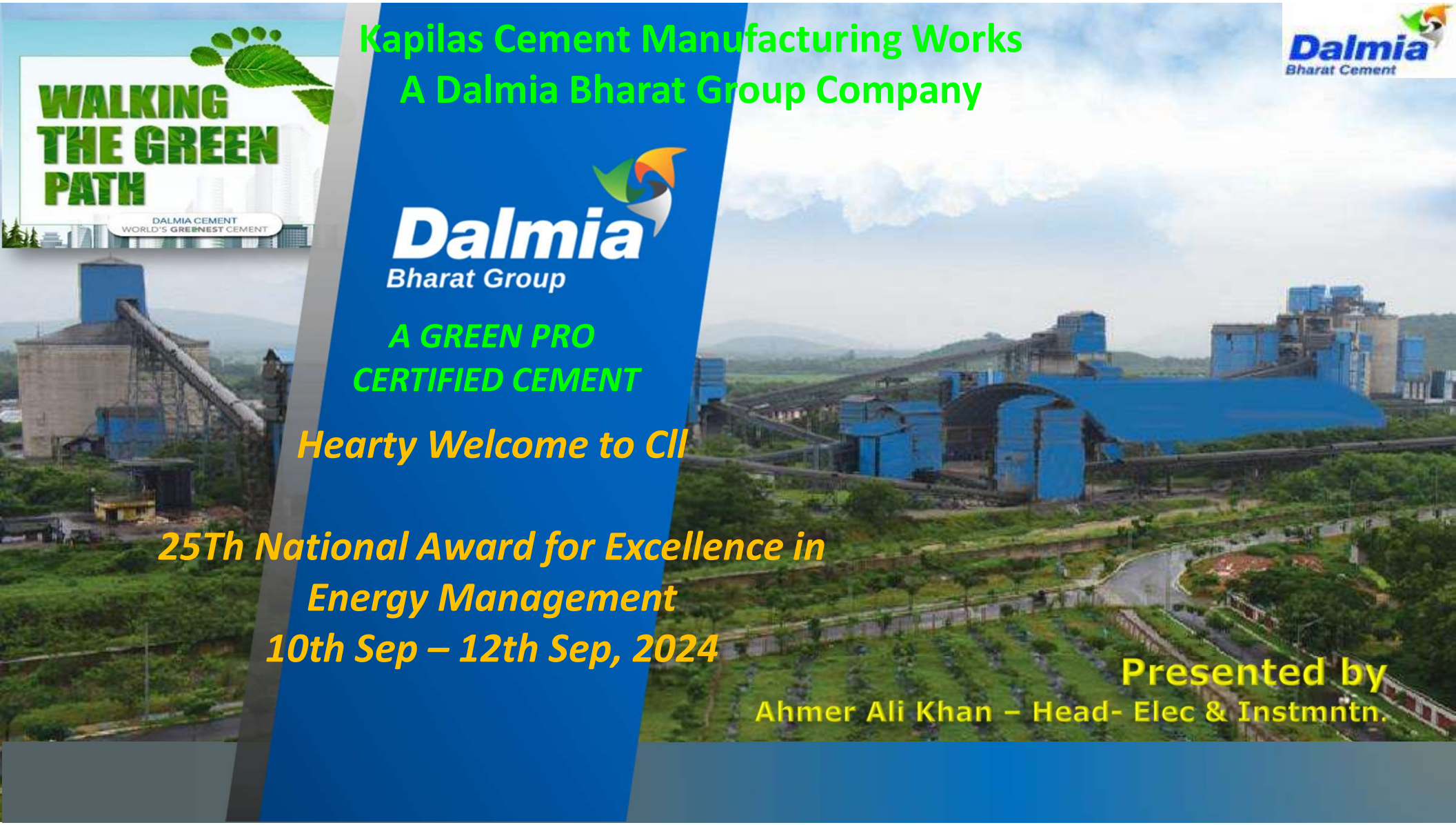


Kapilas Cement Manufacturing Works
A Dalmia Bharat Group Company

Dalmia
Bharat Group

Dalmia
Bharat Cement

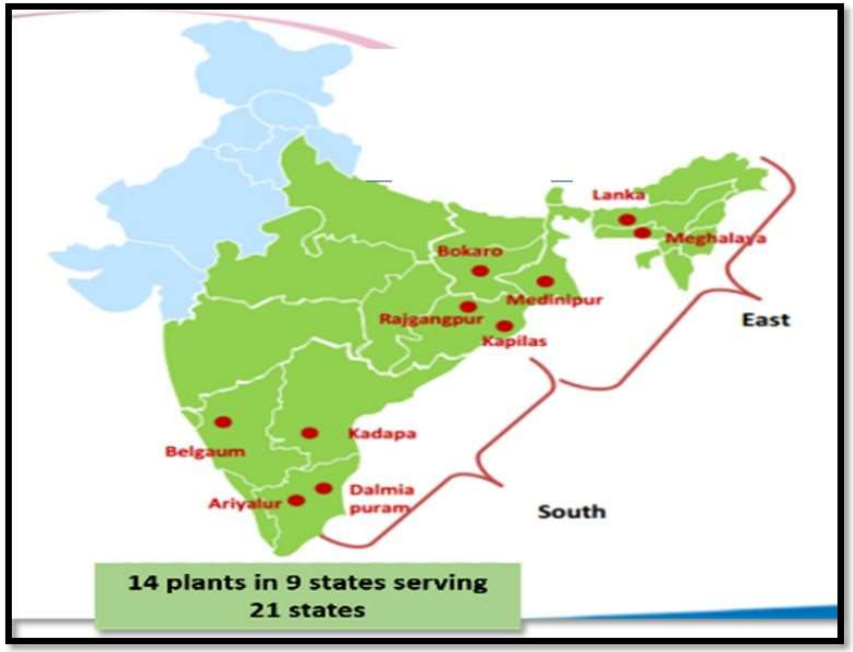
A GREEN PRO CERTIFIED CEMENT

Hearty Welcome to CII

25Th National Award for Excellence in Energy Management
10th Sep – 12th Sep, 2024

Presented by
Ahmer Ali Khan – Head- Elec & Instmntn.

BRIEF INTRODUCTION



- ✓ ***4th Largest Cement Manufcturer in India***
- ✓ ***43.7 Mn Ton of Installed Cement capacity***
- ✓ ***178 MW of Thermal Captive Power Plant***
- ✓ ***100 MW Solar Captive Power Plant &***
- ✓ ***71 MW Waste Heat Recovery System***

- ***Kapilas Cement Manufacturing Works*** *(here-in-after referred to as* ***KCMW****), a Dalmia Bharat Group Company, is operating a* ***Cement Grinding Unit*** *having* ***installed capacity of 4.2 MTPA*** *in Odisha, commissioned* ***on 28th March, 2008.***
- ***A Captive onsite Solar PV Power Plant of 2.5 MW commissioned on 28th March, 2014 and another 17.6MW commissioned on 25th Dec,2021.***
- *Presently operating a* ***LOESCHE VRM (LM 56.3+3 CS) with 4.2 MTPA capacity*** *for Clinker and Slag grinding separately.*
- *Planned to set-up another offsite* ***Ground mounted 10 MW Solar PV Power Plant in FY24- 25 to meet the Captive power requirement*** *of 4.2 MTPA Cement Grinding Units.*
- *Predominantly manufacturer of* ***Portland Slag Cement (PSC)*** *and* ***Composite Cement (CC)*** *with 100% road dispatches.*

➢ ***Certification for Integrated Management System [ISO 9001:2015, 14001:2015 & 45000:2018] and Energy Management System ISO 50001: 2011*** *obtained from TUV NORD.*

CERTIFICATIONS

ISO 9001:2015

ISO 14001:2015

ISO 45001:2018

ISO 50001:2011

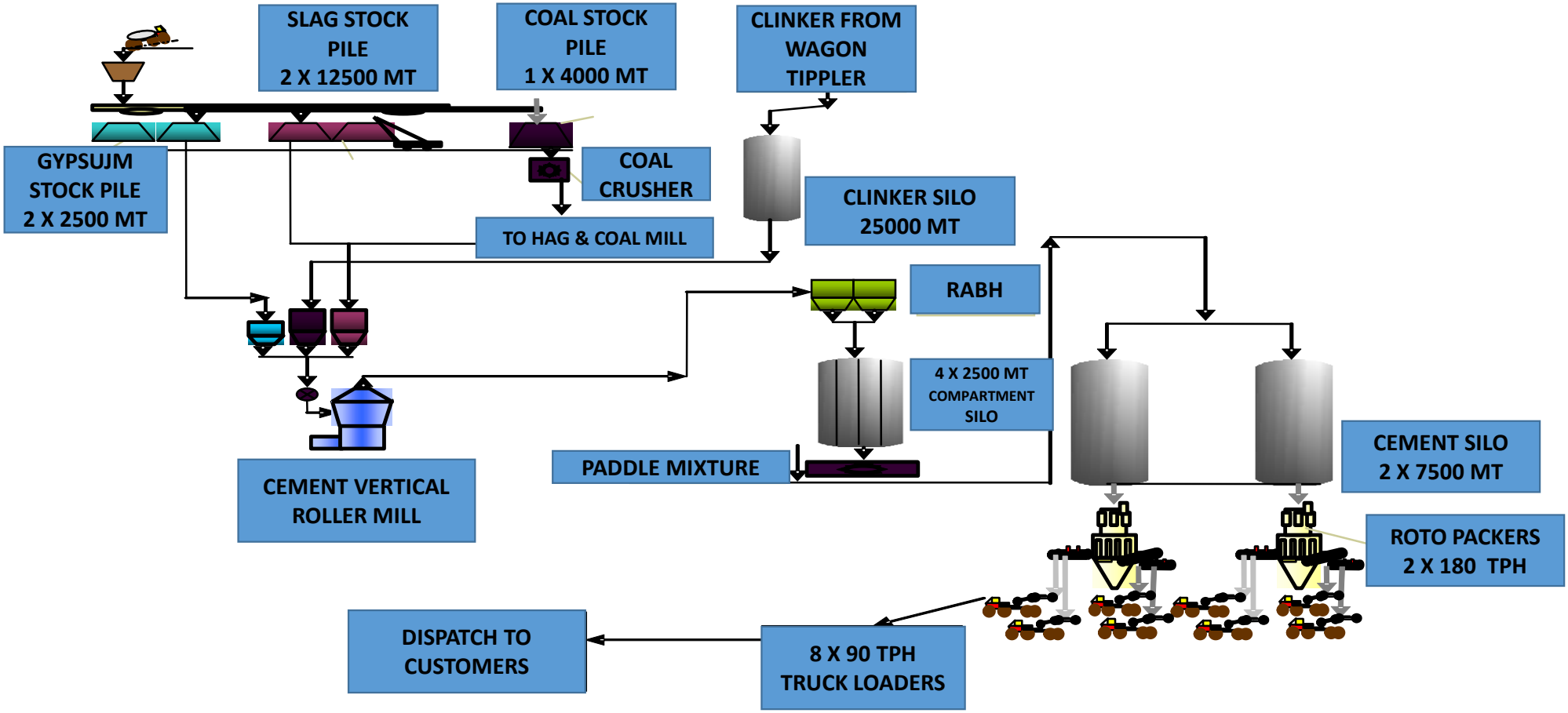
Certification for IMS (QMS, EMS, OH & S and Energy) from TUV NORD

MAJOR ACHIEVEMENTS IN SUSTAINABILITY

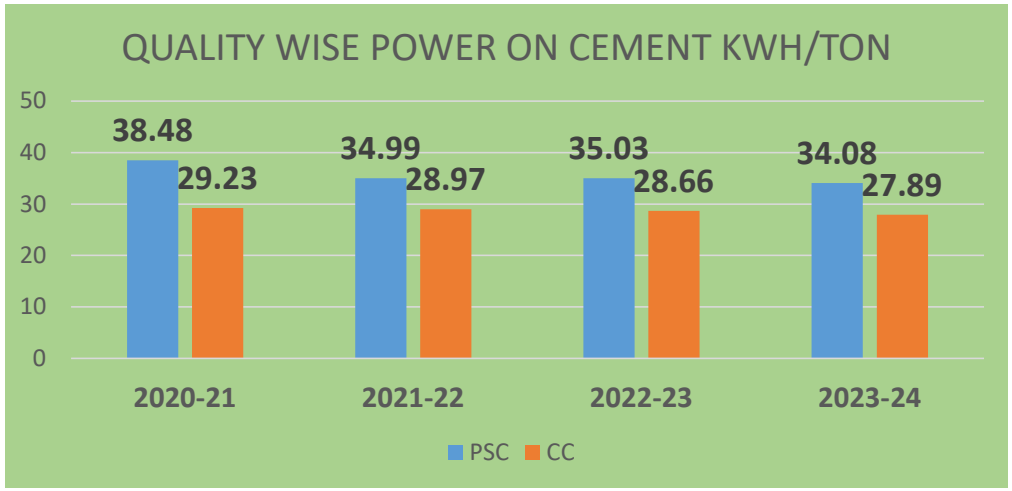
Several innovative projects undertaken to achieve following milestones:

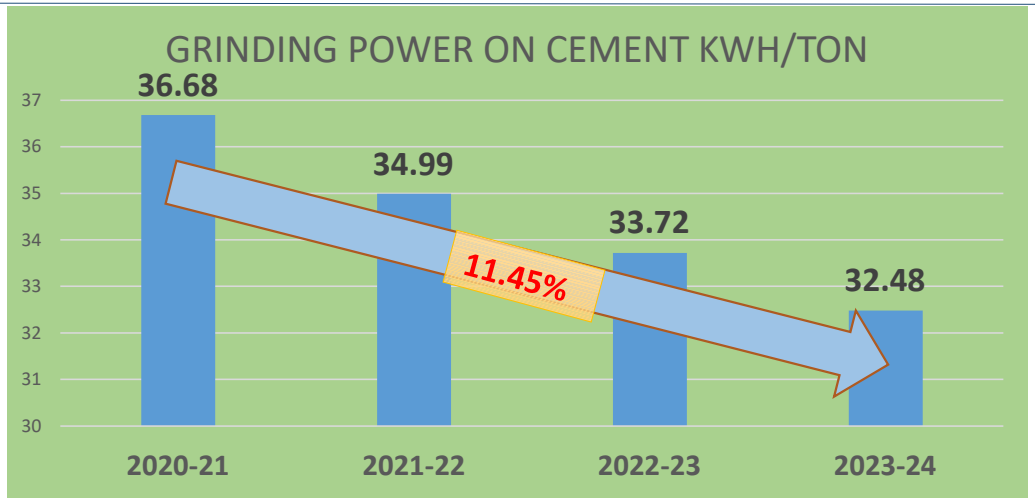
- ✓ 4.6%, 8.2% & 11.6% **reduction of Electrical Energy** in the year of 2021-22 (36.18 KWH/T), 2022-23 (34.84 KWH/T) & 2023-24 (33.5 KWH/T) over 2020-21 (37.9 KWH/T).
- ✓ 2.5 %, 3.7 % & 7.9% **reduction of Thermal Energy** in the year of 2021-22 (65.11 Kcal/Kg cement), 2022-23 (64.3 kcal/kg cement) & 2023-24 (61.5 kcal/kg cement) over 2020-21 (66.8 kcal/kg cement).
- ✓ 33 % & 39 % of the **total power consumption substituted by Solar Power** in FY 23 & FY24 respectively.
- ✓ 86 % of the **total power consumption substituted by Open Access from our own GPP(WHRS),Solar,wind** in FY 23-24.
- ✓ 7% %,13.48% **reduction in Carbon Foot Print** in FY 2023-24 (336 KgCO2/ton) over 2021-22 (389 KgCO2/ton)
- ✓ **Reduction of Clinker factor** upto 30% by optimizing slag addition in PSC upto 67% and **manufacturing Composite Cement** in place of PPC with use of both Dry Fly Ash and B F Slag; thus maintaining Clinker factor @45% in place of PPC of 62% & reduction in both Sp Thermal & Elec Energy Cons.
- ✓ **Green belt developed** over 33% of the total area, i.e. over 115 Acres, with 1.60 Lacs trees planted
- ✓ **Presently 153% Water Positive Unit. 100% utilization of harvested rain water achieved** for Process & Domestic consumption, except for drinking. **Utilization of treated STP water** for Green belt, horticulture & dust suppression purpose.

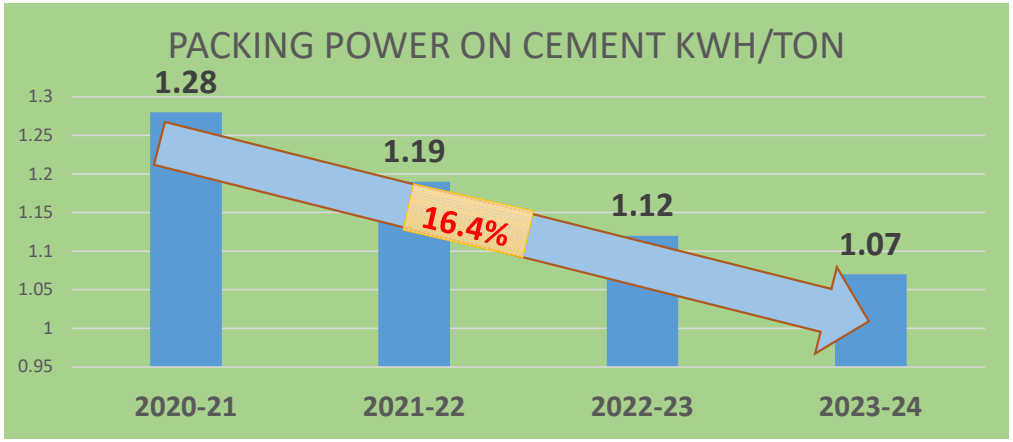
Process Flow Diagram- Cement Manufacturing

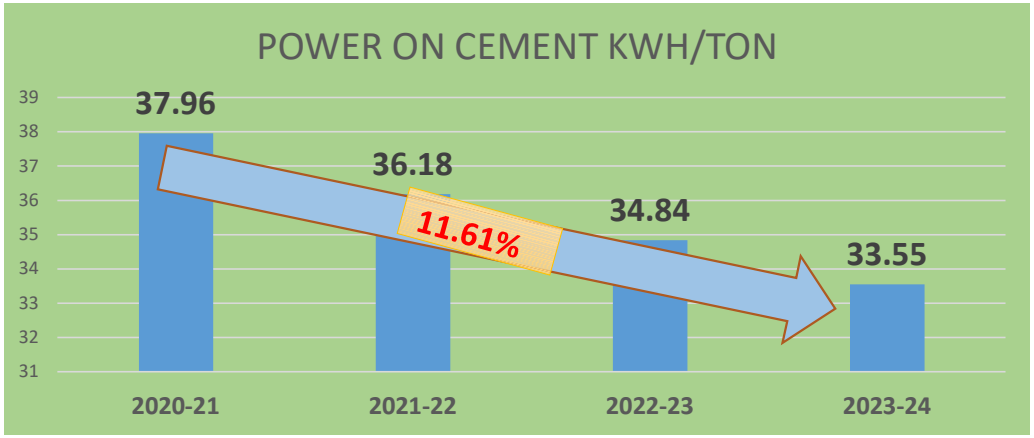


Benchmark: Where We Are ..Where To Go...

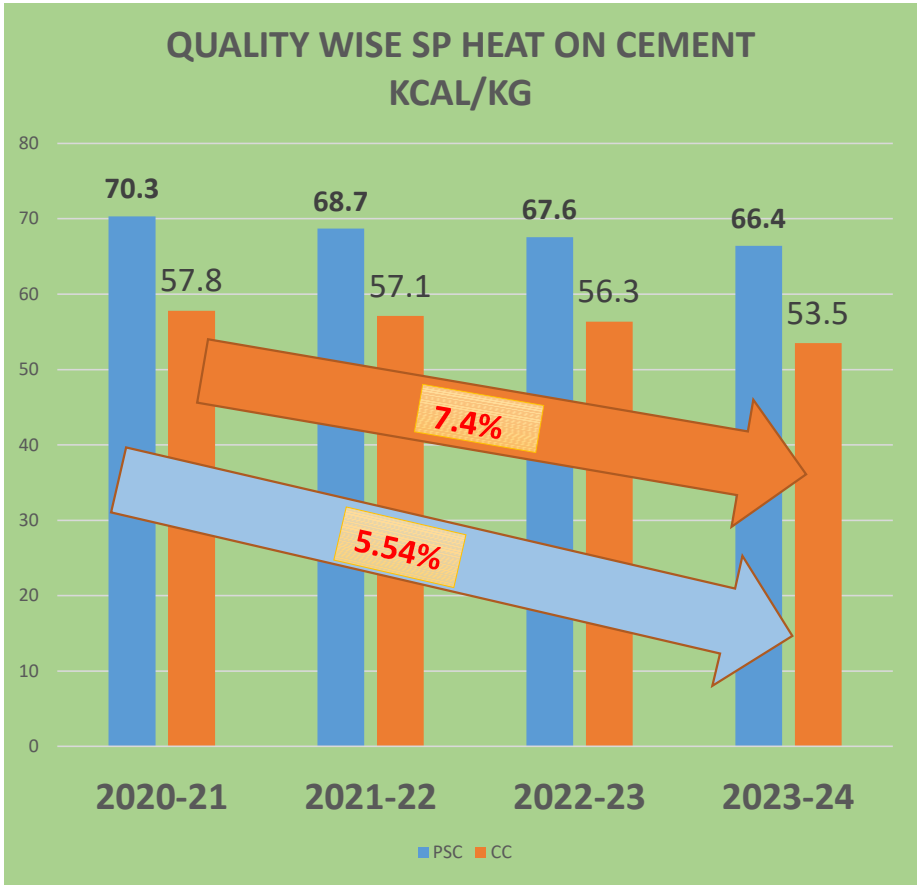


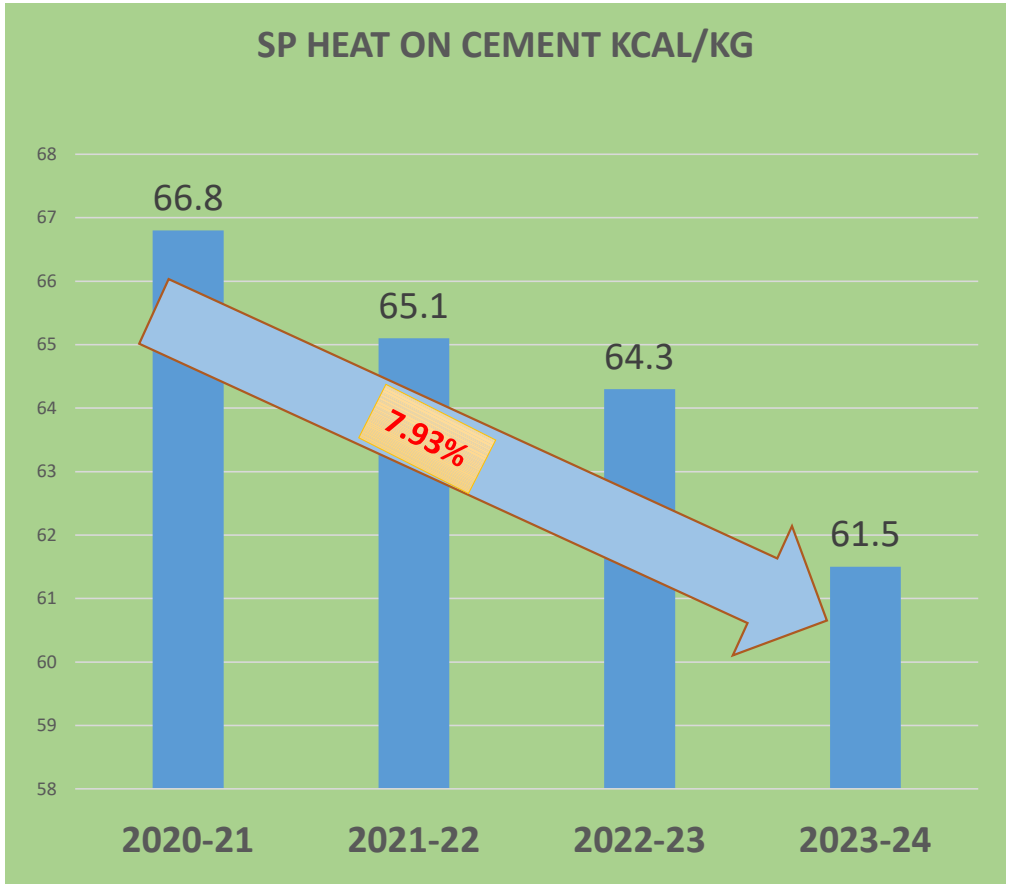




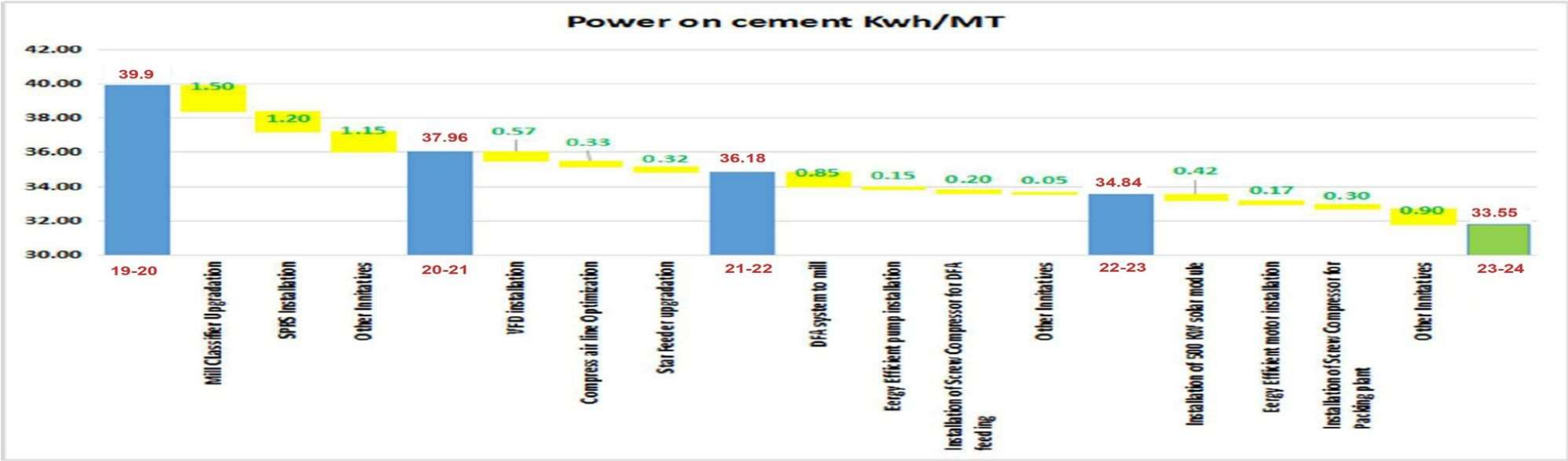


Benchmark: Where We Are ..Where To Go...





Benchmark: Where We Are ..Where To Go…



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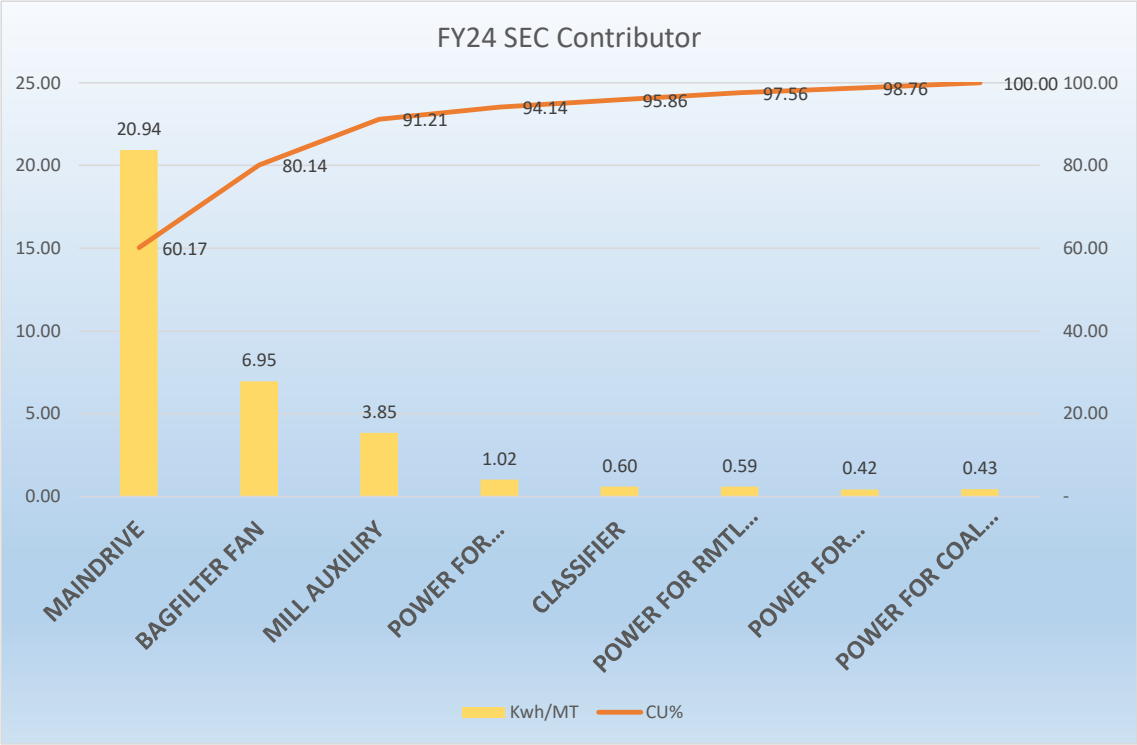
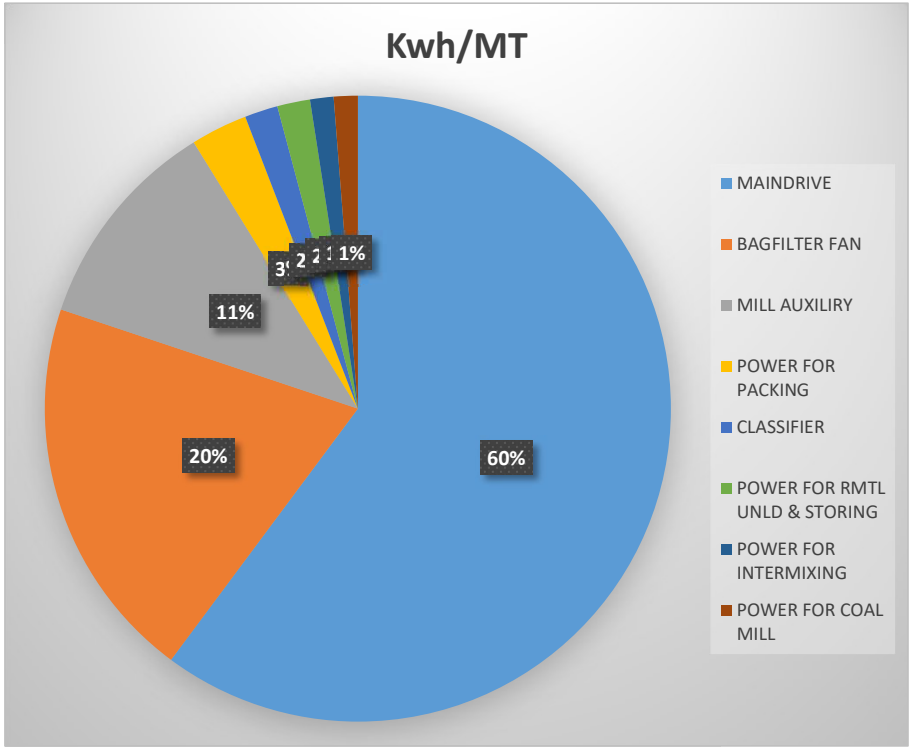




ENERGY CONSERVATION PROJECT IMPLIMENTED

No of Project Completed		34 Nos.
Cost Saving Achieved		704 INR Lacs
Electrical Energy Saved		145 Lacs kWh
Thermal Energy Saved		18886 M Kcal
Project With Nil Investment		18 Nos
Investment Made		256 INR Lacs

Energy Conservation Actions : Without Investment

No	Title of Project	Year	Annual Electrical Saving (Lacs kWh)	Annual Electrical Saving (INR - Lacs)
1	Removal of damper of ID fan motor	21-22	4.53	27.1
2	Optimization of Compressor air use and stopping of two numbers of Auxiliary compressor	21-22	1.81	10.9
3	Switching off two no's of distribution transformer	21-22	0.44	2.64
4	Conversion DELTA TO STAR for 10 no's of motors	21-22	4.53	27.2
5	Replacement of 11 no's of under loaded motors with lower capacity motor	22-23	7.55	45.3
6	Running of one Bag House compressor for total plant and stopping all auxiliary compressor.	22-23	1.5	9.0
7	Arrange lumps breaking arrangement by JCB in WT, earlier it was done by manually, SAC speed increased from 0.2 m/s to 0.3 M/s & Tippling angle reduced 150 deg to 135 deg.	22-23	3.06	18.36

Energy Conservation Actions : Without Investment

No	Title of Project	Year	Annual Electrical Saving (Lacs kWh)	Annual Electrical Saving (INR - Lacs)
8	*Replacement of L11BC3 belt with direct chute, resulted into reduction in SP power consumption*	*22-23*	*0.25408*	*1.52448*
9	*Reduction in tippling time of wagon tippler by increasing Apron conveyor RPM from 600 to 800RPM for clinker and 700RPM to 900 RPM for slag*	*23-24*	*2.85840*	*17.15040*
10	*Reduced delay in start-up of ID fan motor from 15 min to 7 min to save idle running of Auxiliary power.*	*23-24*	*0.47640*	*2.85840*
11	*Developing system for running hour monitoring of compressor, belt conveyor, ID fan motor, highlighting increase of idle running*	*23-24*	*2.54080*	*15.24480*
12	*Modified logic for running of cooling tower fan for running with mill motor winding temp, increasing temperature setting of motor to 130 degC.*	*23-24*	*0.31760*	*1.90560*
	TOTAL SAVINGS (Without Investment) - A		**29.86**	**179.2**

Energy Conservation Actions : Without Investment

No	Title of Project	Year	Annual Thermal Saving (M KCal)	Annual Thermal Saving (INR - Lacs)
13	*Slag to be stored in shed in rainy season & to be stored in outside shed in summer season for reduction in heat consumption*	23-24	4947	50.98
14	*Reduction of False air Across the system limited to 12%*	23-24		
15	*Master roller sealing arrangement for restriction of false air*	23-24		
16	*Reduction on coal mill residue on 90 Micron*	23-24		
17	*Reduction in mill inside water spray*	23-24		
18	*Optimization of the Coal Mill operation by changing angle of static flap and by attending bag house to handle more flow, resulted into increase in TPH from 12.5 to 15 TPH, SP power cons reduced*	23-24	4655	47.14
	TOTAL SAVINGS (Without Investment) - B		***9602***	***98.12***
	TOTAL SAVINGS (Without Investment) A+B (Electrical & Thermal Energy)			***277.32***

Energy Conservation Actions : With Investment

No	Title of Project – Power Saving	Year	Annual Electrical Saving (Lacs kWh)	Annual Electrical Cost Saving (INR - Lacs)	*Investment Made (INR - Lacs)*
1	*Installation of 3 no's of VFD for mill feeding circuit*	*21-22*	*0.85*	*5.1*	*4*
2	*3 no's of VFD installation for packing plant bag filter fan*	*21-22*	*1.81*	*10.9*	*10*
3	*Replacement of 300 no.s of 70watt HPSV lamp with 32watt LED lamp*	*21-22*	*0.53*	*3.2*	*5.1*
4	*Louver ring design modification*	*21-22*	*2.93*	*17.6*	*11.5*
5	*Replacement of existing RAL by 400x400mm against 300X300mm of Wagon tippler bag house*	*21-22*	*0.36*	*2.2*	*4.5*
6	*Capacity up gradation of OPC air slide of MC silo*	*21-22*	*1.51*	*9.1*	*2*
7	*Screw Compressor to be installed alongwith a Dryer (spare Compressor of BCW to be used)*	*22-23*	*4.5*	*27*	*10*
8	*Installation of 11KW, 12 RPM starfeeder Geared motor in place of 7.5 KW, 8 rpm geared motor.*	*22-23*	*10.91*	*65.46*	*8*
9	*Installation of screw compressor for Fly ash unloading earlier it was done by reciprocating compressor.*	*22-23*	*0.146*	*0.87*	*8*

Energy Conservation Actions : With Investment

No	Title of Project – Power Saving	Year	Annual Electrical Saving (Lacs kWh)	Annual Electrical Cost Saving (INR - Lacs)	Investment Made (INR - Lacs)
10	Installation of 300 nos of 12o watt LED lights to replace 250 watt HPSV lamp	23-24	1.42350	8.4	4
11	Injection of 100% DFA in Mill in place of Wet Fly Ash, resulted into increase in TPH from 220 to 284 TPH, Sp power cons reduced	23-24	10.98	65.88	10
12	Installation of screw compressor of 160 KW replacing 250 KW reciprocating compressor, resulted into saving	23-24	0.95280	3.2	5.1
13	Installation of VFD for mill feeding circuit bag filter	23-24	4.5	27	10
14	Installation of belt weigher system in all feeding circuit	23-24	10.91	65.46	8
	TOTAL SAVINGS (With Investment) – Electrical Energy		**52.313**	**331.37**	**100.2**

Energy Conservation Actions : With Investment

No	Title of Project	Year	Annual Thermal Saving (M KCal)	Annual Thermal Saving (INR - Lacs)
15	*Coal Mill grinding element replacement as per energy audit*	*23-24*	*1935*	*21.44*
16	*Feeding of 100% DFA in Mill in place of Wet Fly Ash, resulted into increase in TPH from 220 to 284 TPH, Sp power cons reduced*	*23-24*	*7349*	*74.42*
	TOTAL SAVINGS (Without Investment) - B		***9284***	***95.86***

Summary of Savings of EnCON Projects

Total Electrical Saving (Lacs kWh)	*Total Electrical Saving (INR Lacs)*	*Total Thermal Saving (M KCal)*	*Total Thermal Saving (INR Lacs)*	*Total Investment Made (INR Lacs)*
145.173	510.57	18886	194	256

Energy Conservation Actions : FY25

No	Year	Title of Project	Annual Electrical Saving (kWh)	Annual Thermal Saving (Ton/year)
1	2024-25	Installation of 10MW off site solar power system and consuming solar banked power during night hrs.	13000000	0
2	2024-25	Installation of belt weigher system for feeding section	34000	0
3	2024-25	Installation of screw compressor for packing plant-5	140000	0
4	2024-25	Installation of new energy efficient motrs for the locations where rewinding done for more than 4 times	170000	0
5	2024-25	Replacement of underloaded motors	340000	0
TOTAL			**13,84,000**	**0**

Innovative Project: 1

Project: Modification of Material Handling circuit to avoid re-handling, by installation of two belt conveyors and connecting Truck tippler and BRU to direct hopper and clinker silo and separate pipe line connection from DFA unloading to mill top DFA bin

Objective: Reduction in Specific power Consumption.

Scope:

1. We have observed that raw materials coming from trucks and HYWA were unloaded at truck tippler and material oes to stacker pile.
2. Clinker coming from truck were also unloaded at wagon tippler hopper side or stacker yard.
3. We have observed that double handling of DFA first from buler to fly ash silo to mill.

Action taken :

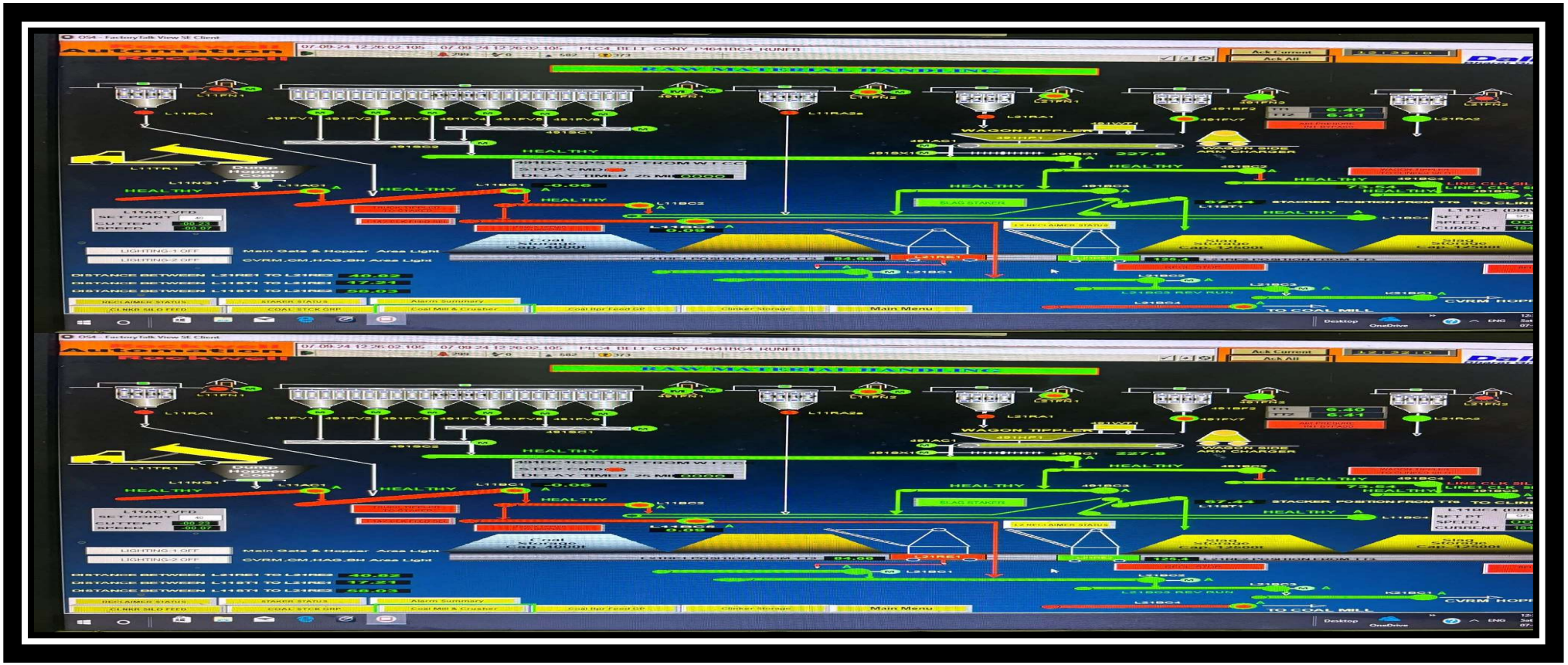
1. Devloped new circuit for direct fedding of slag, coal, gypsum,clinker to hopper .
2. Devloped new circuit with BRU for unloading of Clinker and Transport of same to clinker silo with shortest path.
3. Devloped one new line for direct feeding of DFA to mill thru SFM top bin by passing entire silo operation

Benefits :

- Sp power on cement reduced by **1.83 kWh/Ton**
- Total saving on account of heat & power is **Rs. 140 Lakh/Annum**

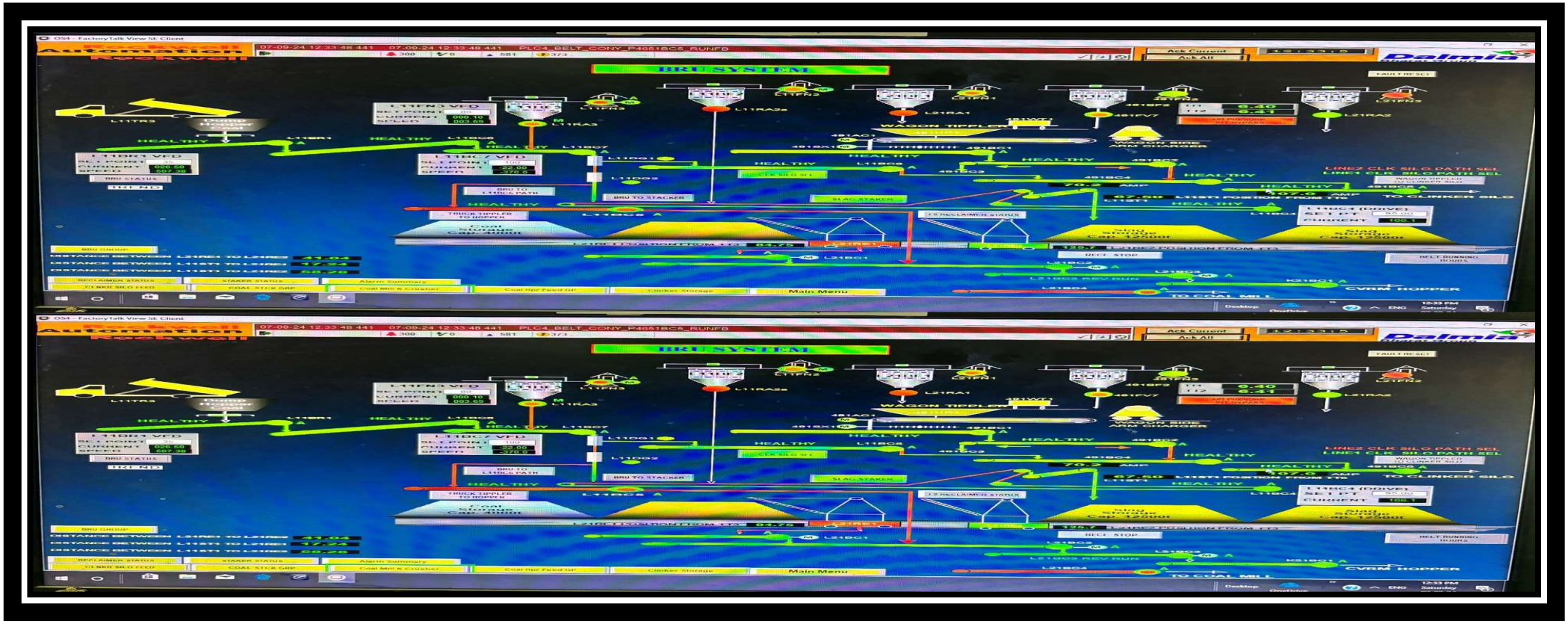
Innovative Project: 1, Continues….

Installation of new belt conveyor from truck tippler to TT 3, which can directly feed to hopper by passing stacker and reclaimer.



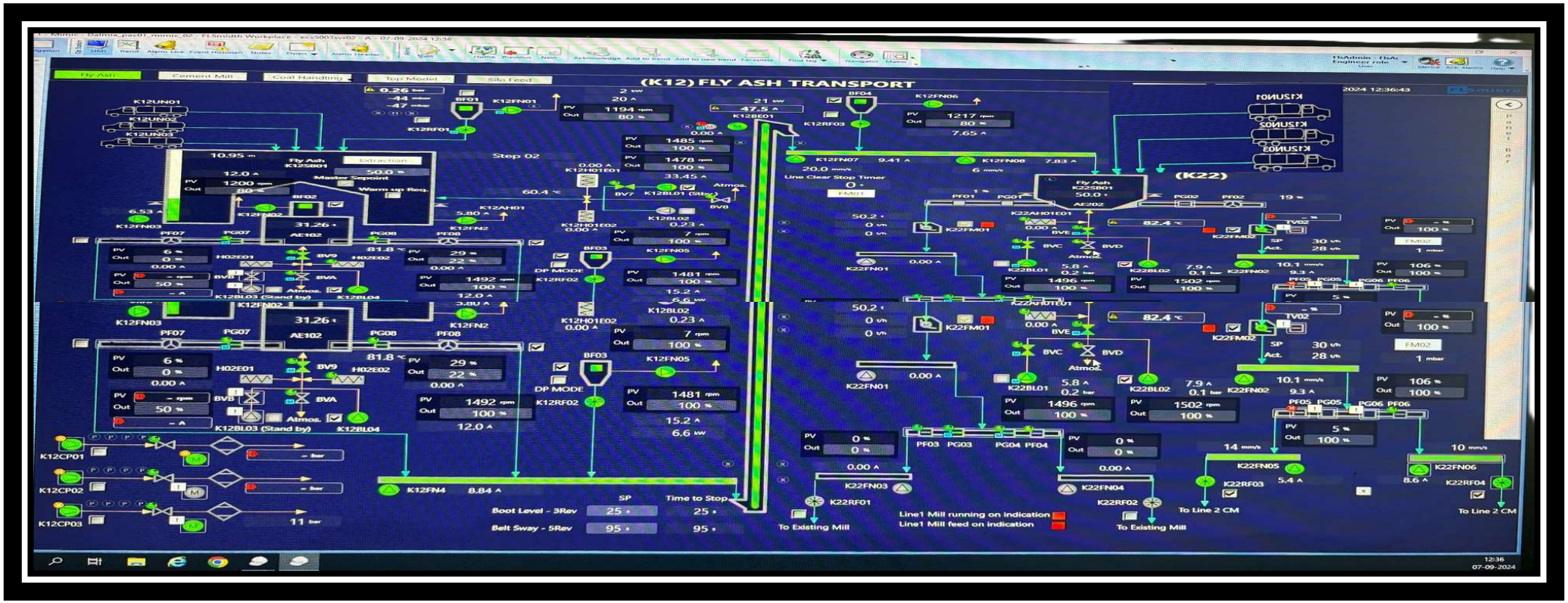
Innovative Project: 1, Continues....

Installation of BRU unit and connecting same with direct mill hopper line, clinker silo and Stacker Yard bypassing wagon tippler circuit while unloading clinker , slag through trucks.



Innovative Project: 1, Continues….

Installation of new DFA unloading –Cum mill feed line which can feed DFA from bulker to mill top bin, thus bypassing entire DFA unloading to siolo then feed to mill.



Innovative Project: 2

Reduction of CVRM main bag filter fan power by reducing false air and replacement of higher capacity motor of 3600 KW with lower capacity 3200 KW motor.

Objective: Reduction in Heat & power Consumption.

Scope:

We have observed that CVRM main bag house has higher false air.

ID fan running with SPRS at higher set point .

Bag house DP always remain abover 180.

Action taken :

1. Replacement of bag house hopper plenum plate, tile fixing on plenum plate.
2. Ceracoat lining at mill outlet duct.
3. Replacement of 3600 KW motor with spare 3200 KW motor available.

Benefits :

- **SP power on cement reduced by 1.1 kWh/Ton**
- **Heat consumption saved during this period 18000 MKcal**
- **Total saving on account of heat & power is Rs. 206 Lakh/Annum**

Innovative Project: 3

- **Project: Arresting leakage of compressor air, interconnection of all air receivers and installation of 3 nos of screw compressor with VFD of capacity 160 KW, 90 KW and 145 KW in place of 250 KW, 110 KW raciprocating compressor**
- **Objective: Reduction in Power Consumption.**

Scope:

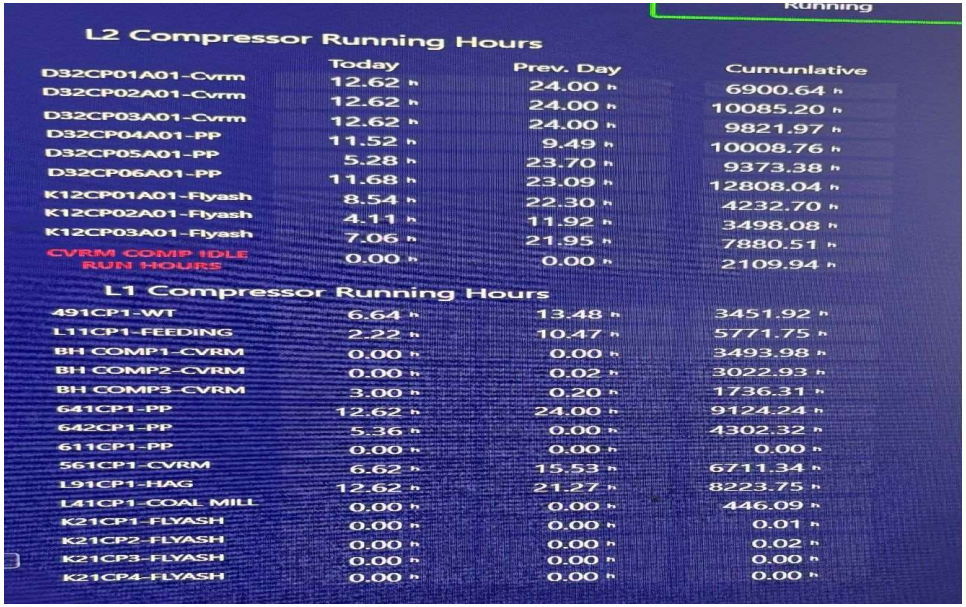
1) There are raciprocating compressor of different rating installed for different circuit as a result there were idle running and leakage of air, idle running of cooling tower pump observed.

2) During maintenance,due to capacity limitation, higher compressor needed to run.

3) Compressor air used for body cleaning

Action taken:

- Provided compress air line to different locations in Coal Mill & Packing House and stopped all auxiliary compressors.
- Installed screw compressor in place of reaciprocating.
- Running hrs pop up given in PLC for compressor .
- Installation of body cleaning blower at different location.
- Providing air presure indication for auxilary bagfilters in CCR.



L2 Compressor Running Hours

	Today	Prev. Day	Cumunlative
D32CP01A01-Cvrm	12.62 h	24.00 h	6900.64 h
D32CP02A01-Cvrm	12.62 h	24.00 h	10085.20 h
D32CP03A01-Cvrm	12.62 h	24.00 h	9821.97 h
D32CP04A01-PP	11.52 h	9.49 h	10008.76 h
D32CP05A01-PP	5.28 h	23.70 h	9373.38 h
D32CP06A01-PP	11.68 h	23.09 h	12808.04 h
K12CP01A01-Flyash	8.54 h	22.30 h	4232.70 h
K12CP02A01-Flyash	4.11 h	11.92 h	3498.08 h
K12CP03A01-Flyash	7.06 h	21.95 h	7880.51 h
CVRM COMP IDLE RUN HOURS	0.00 h	0.00 h	2109.94 h

L1 Compressor Running Hours

491CP1-WT	6.64 h	13.48 h	3451.92 h
L11CP1-FEEDING	2.22 h	10.47 h	5771.75 h
BH COMP1-CVRM	0.00 h	0.00 h	3493.98 h
BH COMP2-CVRM	0.00 h	0.02 h	3022.93 h
BH COMP3-CVRM	3.00 h	0.20 h	1736.31 h
641CP1-PP	12.62 h	24.00 h	9124.24 h
642CP1-PP	5.36 h	0.00 h	4302.32 h
611CP1-PP	0.00 h	0.00 h	0.00 h
561CP1-CVRM	6.62 h	15.53 h	6711.34 h
L91CP1-HAG	12.62 h	21.27 h	8223.75 h
L41CP1-COAL MILL	0.00 h	0.00 h	446.09 h
K21CP1-FLYASH	0.00 h	0.00 h	0.01 h
K21CP2-FLYASH	0.00 h	0.00 h	0.02 h
K21CP3-FLYASH	0.00 h	0.00 h	0.00 h
K21CP4-FLYASH	0.00 h	0.00 h	0.00 h

Benefits :

- Sp power on cement reduced by **0.37 kWh/Ton**
- Annual Electrical Cost Saving **Rs. 9.53 Lakh/Annum**

Innovative Project: 4

- **Project: Cooling tower water circulation systyem optimisation by replacement of 6 nos of energy in-efficient pump, idle running monitoring and modification of interlock for cooling tower fan.**
- **Objective: Reduction in Power Consumption.**

Scope:

1) Previously there are pumps installed and running for last 10 yrs.

2) After energy audit it was observed that efficiency of pumps are reduced.

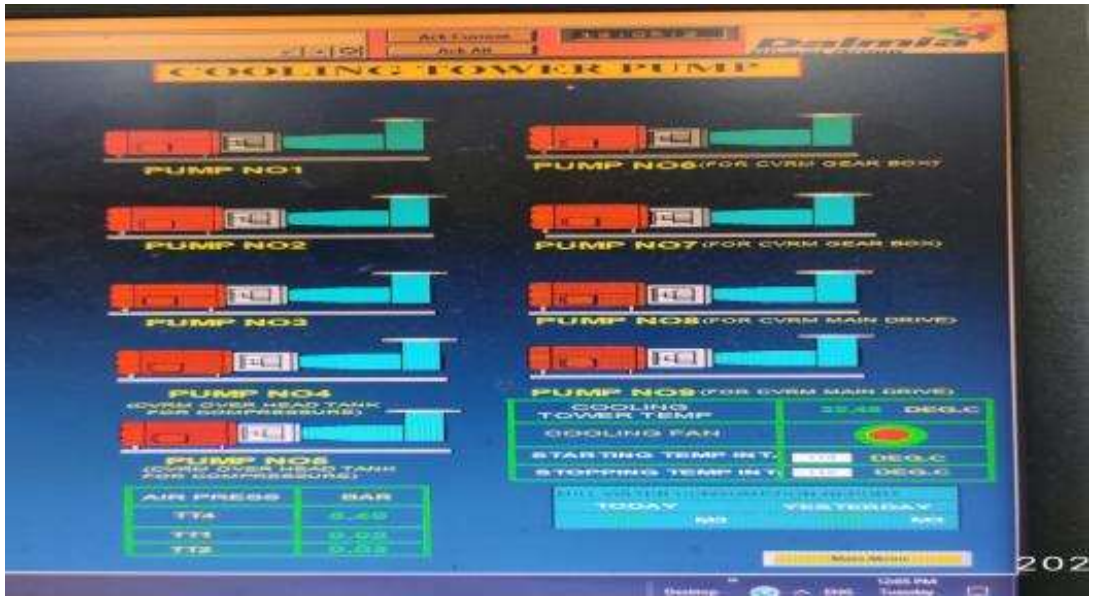
3) There are idle running of cooling tower fan and pumps observed.

Action taken :

1) Replacement of old energy in efficient pumps with new energy efficient pumps of capacity 90 and 22 Kw.

2) Modification of cooling tower fan running logic with mill motor winding temp and gear box temp interlock.

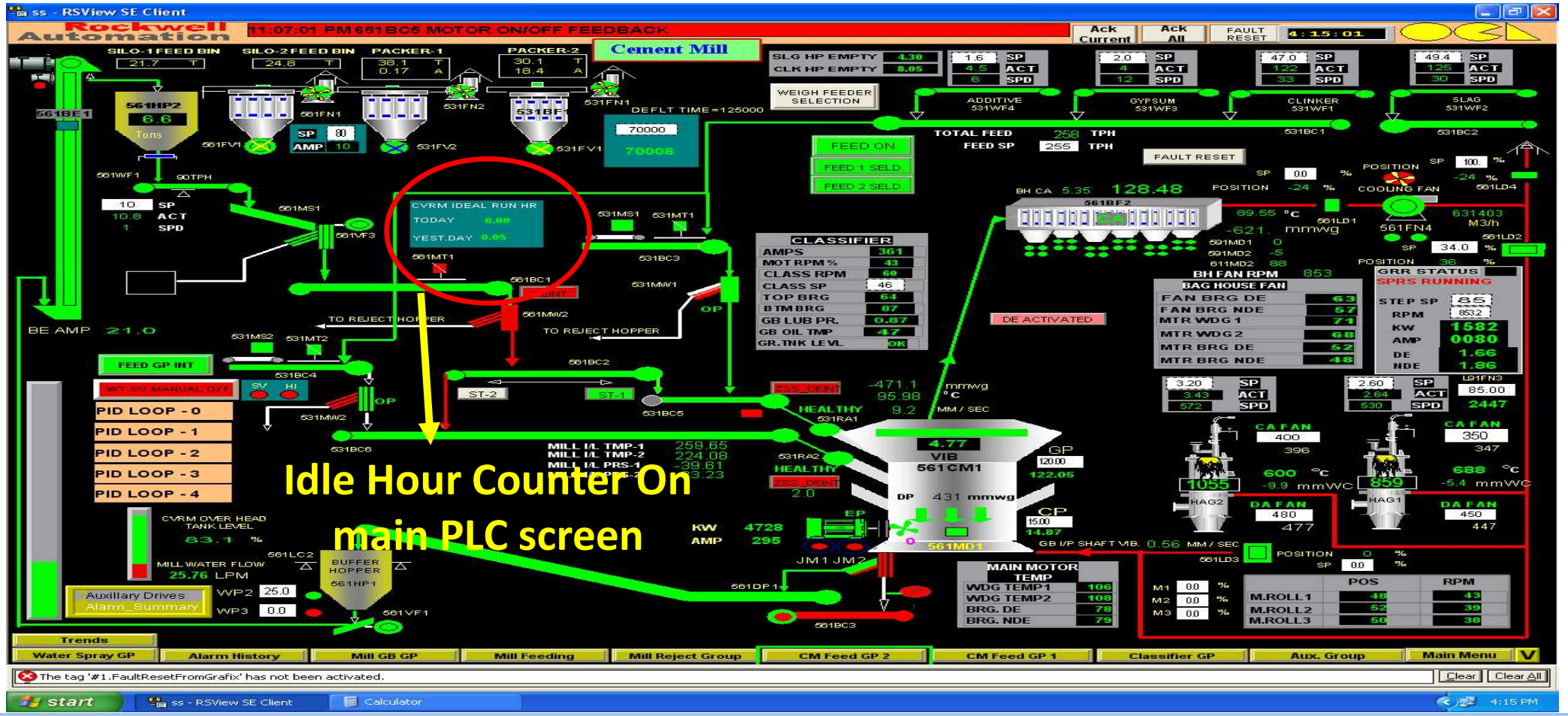
3) Providing display screen for monitoring running hrs of each pump.



Benefits :

- **Sp power on cement reduced by 0.18 kWh/Ton**
- **Annual Electrical Cost Saving Rs. 17.52 Lakh/Annum**

Idle Running Hour Monitoring



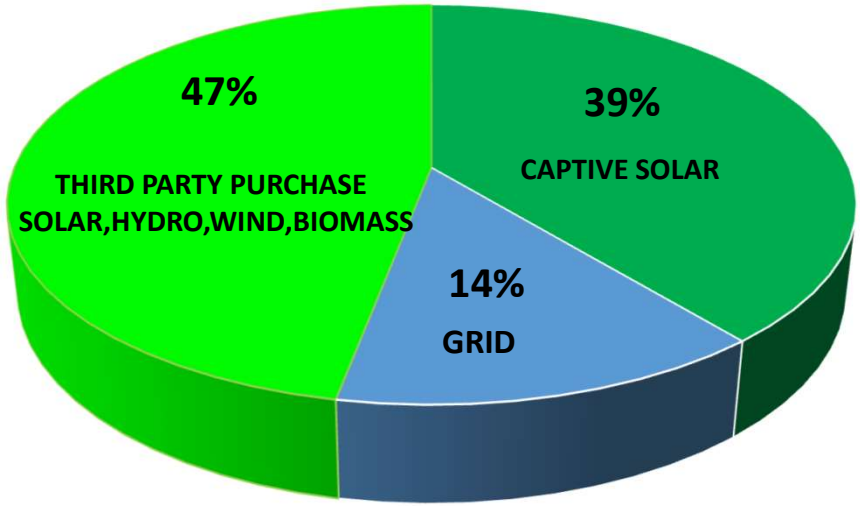
Digitization in Monitoring

Ewatch system access from Computer

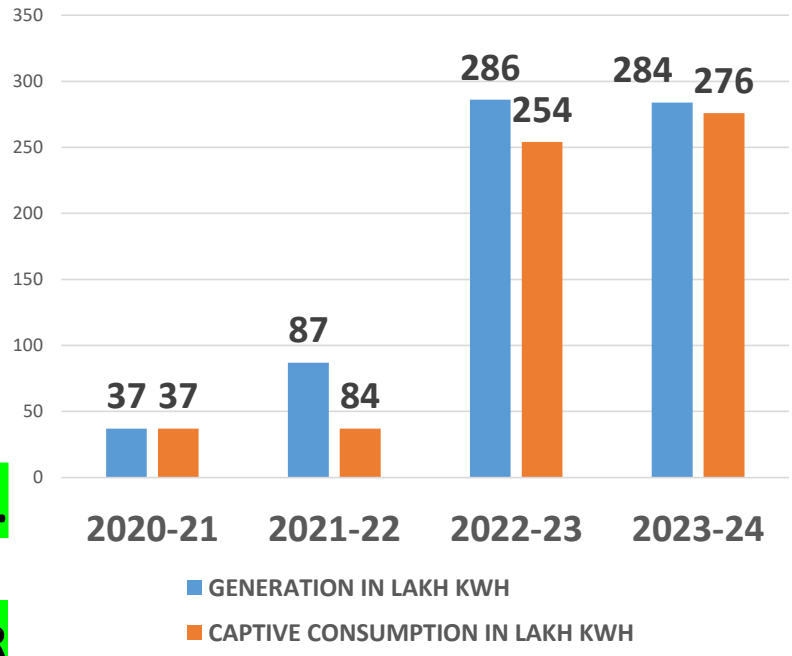
Ewatch system access from Mobile

Renewable Energy Usage …..

POWER MIX



SOLAR POWER GENERATION V/S CAPTIVE CONSUMPTION



*** 86% OF TOTAL ENERGY REPLACED FROM GREEN ENERGY.**

*** 39% OF TOTAL ENERGY REPLACED FROM CAPTIVE SOLAR**

INOVATIVE PROJECTS TO OPTIMISE THE OPERATIONAL PERFORMANCE

Dalmia Bharat Group

Innovative Initiatives taken to optimize Generation despite degradation of Modules :

- ✓ Tilting solar modules two times in a year with trials at different angle on every season, i.e. Winter & Summer.
- ✓ Cleaning entire solar modules in 9 cycles in month in KCW by both Wet and Dry Robotic system
- ✓ *Regularly checking VOC of solar modules on every month and replacing faulty modules*

INOVATIVE PROJECTS TO OPTIMISE THE OPERATIONAL PERFORMANCE

Dalmia Bharat Group

Innovative Initiatives taken to optimize Generation despite degradation of Modules :

- ✓ *Conditional based cleaning by monitoring soiling loss.*
- ✓ *Cleaning of modules of one inverter of each block daily and comparing the PR of the same inverter with others*
- ✓ *Use of water draining clamp to drain the stagnant water and thereby prevents soiling effect at the end of the panels, thus improves generation by 2 % and improves panel life.*

Location	Inverter Nos.	DC capacity (kW)	22/11/22 PR%	23/11/22 PR%	24/11/22 PR%	25/11/22 PR%	26/11/22 PR%
ICR 1	1	239.7	85.1	85.4	85.6	85.4	85.3
	2	239.7	83.2	84.4	84.6	84.3	83.9
	3	239.7	82.4	81.9	82.9	83.5	83.8
	4	239.7	85.0	83.2	83.7	84.1	84.6
	5	239.7	82.9	84.4	84.6	84.1	83.6
	6	239.7	83.0	84.5	84.4	83.3	83.0
	7	239.7	83.8	84.4	85.2	83.1	82.7
	8	239.7	84.5	84.6	84.8	84.3	84.2
	9	239.7	84.2	85.1	85.8	84.2	84.8
	10	239.7	81.8	82.5	83.1	84.6	84.8
	11	239.7	83.2	84.4	84.5	84.7	84.3
	12	239.7	82.6	83.2	83.7	84.9	83.9
	13	239.7	82.7	83.2	83.9	85.2	84.1
	14	239.7	84.3	84.9	84.7	84.4	85.4
	15	239.7	84.3	84.6	84.2	84.2	83.8
	16	239.7	82.9	83.2	83.7	84.1	83.6
	17	239.7	83.9	81.9	81.3	84.3	84.7
	18	239.7	83.6	81.8	81.4	83.5	85.1
	19	239.7	83.9	82.0	82.4	83.4	85.8
	20	239.7	85.8	83.6	83.8	82.9	83.5

BEST PRACTICES TO OPTIMISE THE OPERATIONAL PERFORMANCE

- ✓ Condition monitoring of transformer, HT and LT switch gear and all the repairs or rectification done in the evening hrs. with out affecting plant performance. Thus 100% up-keep achieved in last year in both units.
- ✓ Cleaning and replacing air filters of Inverter at regular interval and also arrangement done for better cooling . Thus increased efficiency of inverters.
- ✓ Switching of power transformer of solar power during night hours resulting in saving of 28,800Kwh/year
- ✓ Improved housekeeping & Deweeding of grass and unwanted tress so as to provide safer path for cleaning of modules and attending breakdown.
- ✓ *Auto water spray system implementated which given us generation increase of 16,000Kwh in two months April and May,18 which 2.2 % more.*

BEST PRACTICES TO OPTIMISE THE OPERATIONAL PERFORMANCE

- ✓ *Planting tress like water melon, pineapple for cooling of solar modules during summer season.*
- ✓ *We have planted 10,000 numbers of pineapple tress.*
- ✓ *Water used for Module cleaning is being reused for plantation in Solar Power Plant.*
- ✓ *Necessary construction of drains done so as to reuse cleaning water and Rain Water.*

Renewable Energy Usage Continues.....

Clean Energy Solutions Solar study lamps & Clean cooking Households Fuel efficient stove distributed to nearby village to promote use of renewable Energy

Installation of 125 no.s 50watt Solar Street light for plant area lighting and main road lighting

20.1 MWp GROUND MOUNTED SOLAR PV CPP

DCBL – ENVISIONINNG CARBON –ve DALMIA CEMENT

Carbon Negative Roadmap of DCBL…

Dalmia Determined Contributions (DDCs)

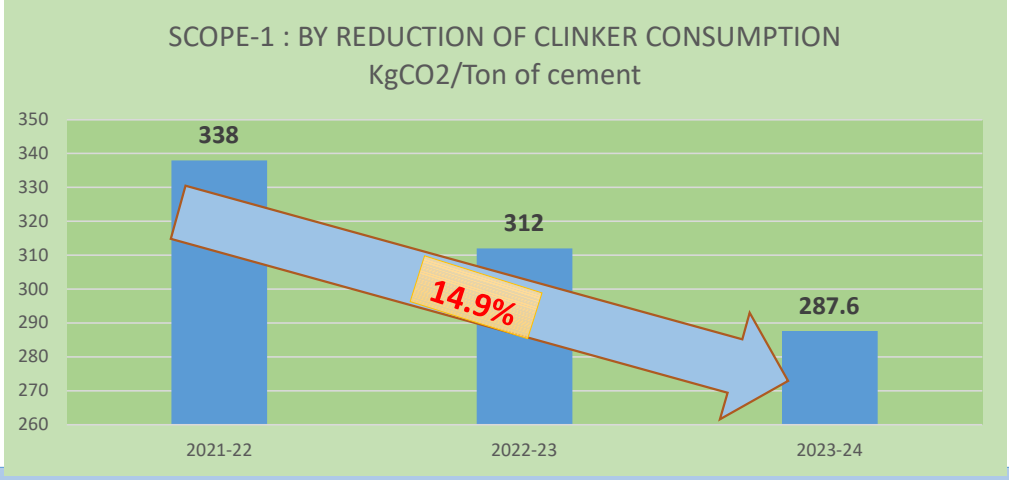
- Switching over to 100% green fuels and power under fossil free initiative (RE 100),
- Reducing clinker factor and heat consumption in incremental stages (EP 100),
- Switch over to solar drying of raw materials (RE 100)
- Development of new low-carbon cements such as LC^3 (innovation)
- Carbon Capture and Utilisation (CCU)
- Carbon Sequestration (nature based solution)

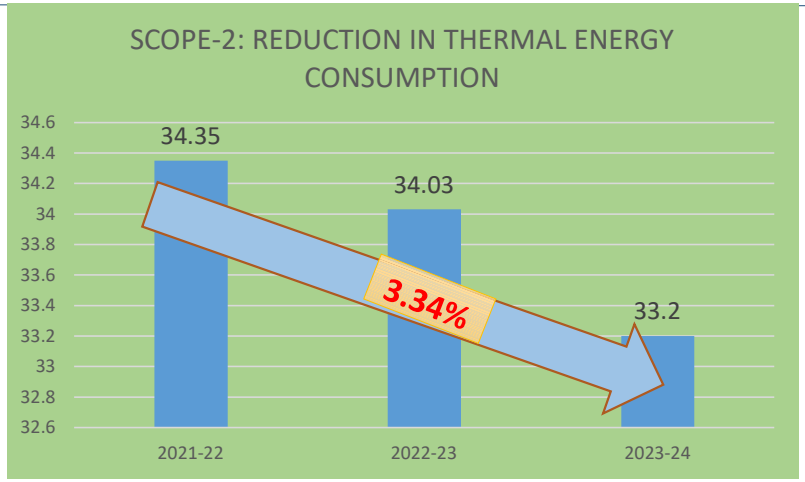
Dalmia Cement announces carbon negative roadmap at Future Economy session invited by Harvard Business Review in San Francisco

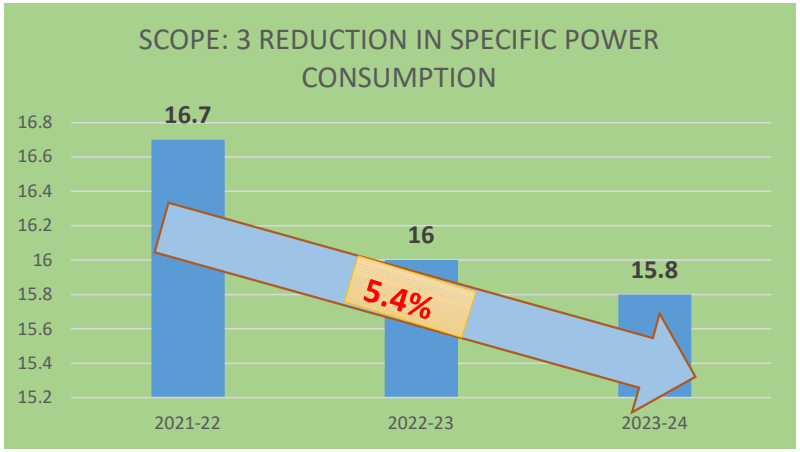
GHG INVENTORIZATION – CARBON FOOTPRINT REDUCTION

❖Initiatives to reduce carbon footprint:

- ✓ *Reduction of thermal energy (Kcal/Kg) by process optimization*
- ✓ *Installation of 20.1 MW solar PV power plant to utilize renewable energy and Reduction of total KWH consumption through various initiatives.*
- ✓ *Improving clinker factor by higher addition of slag for cement upto70% & Reduction of Fuel oil consumption by improving reliability*
- ✓ *Use of battery operated vehicle for internal transport.*

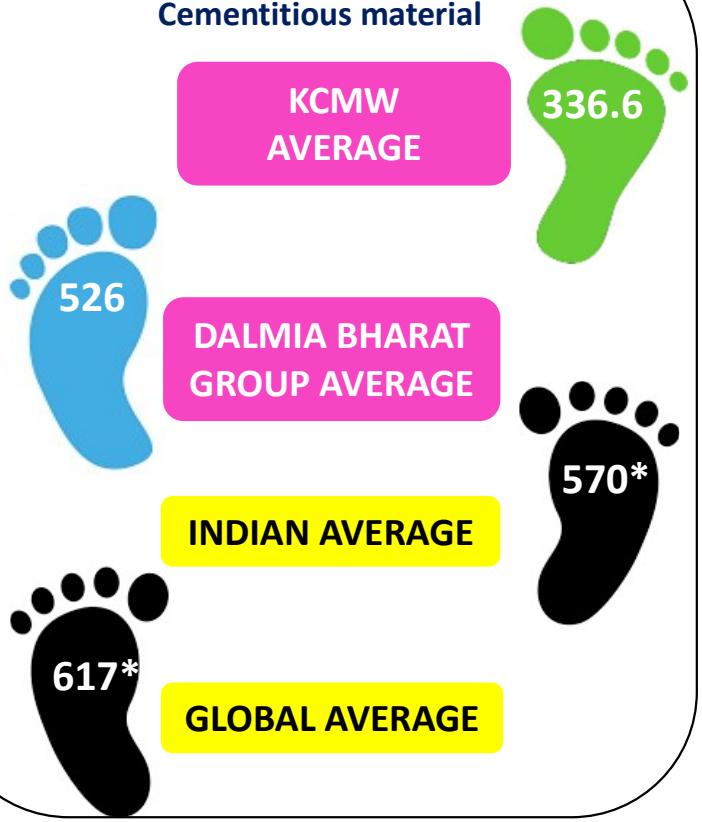






GHG INVENTORIZATION – CARBON FOOTPRINT REDUCTION

Estimated Net CO_2 emissions in kg /ton of Cementitious material

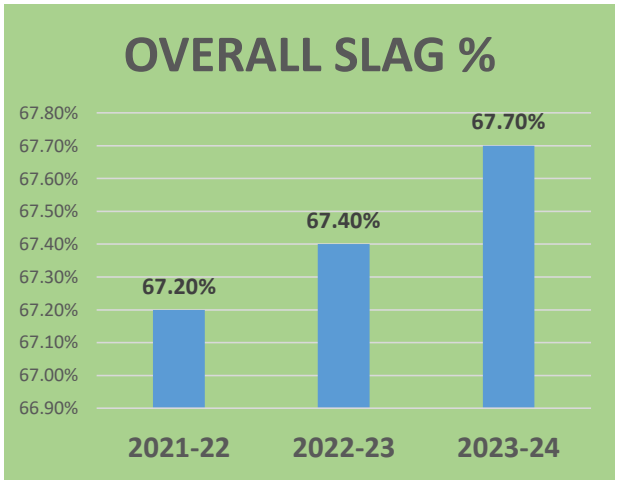


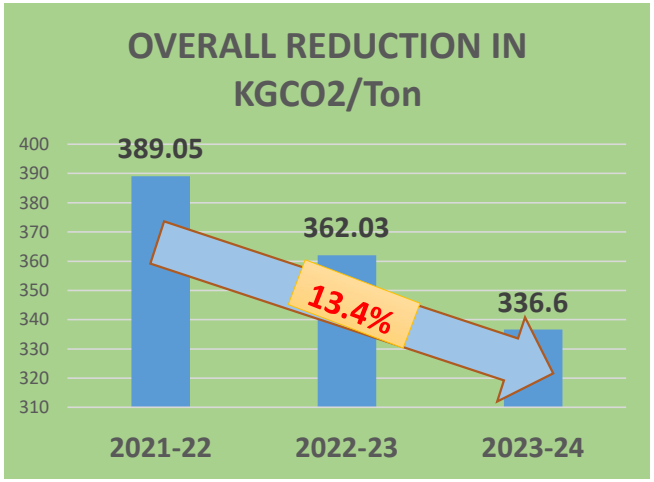
*Based on Cement Sustainability Initiative (CSI) GNR data published in Year 2023.

❖ **Initiatives to reduce carbon emission :**

- *Increase in use of B F Slag %*
- *Journey started with 43.5% in year 2013 to 67.7% in Year 2024*

Dalmia Bharat Group Globally
Ranked No 1
by CDP (Carbon Disclosure Project)





GHG INVENTORIZATION – CARBON FOOTPRINT REDUCTION

Use of Battery operated vehicle for plant internal transport saved 13,000 Kg CO2 emission per year

Installed Solar water heating system on G+8 storied Residential Tower for 119 households. Thus saved 205632 Kwh in a year considering gyser capacity of 1.5 KW each and 4 hrs running in a day, thus saved 193294 Kg CO2 emission in year.

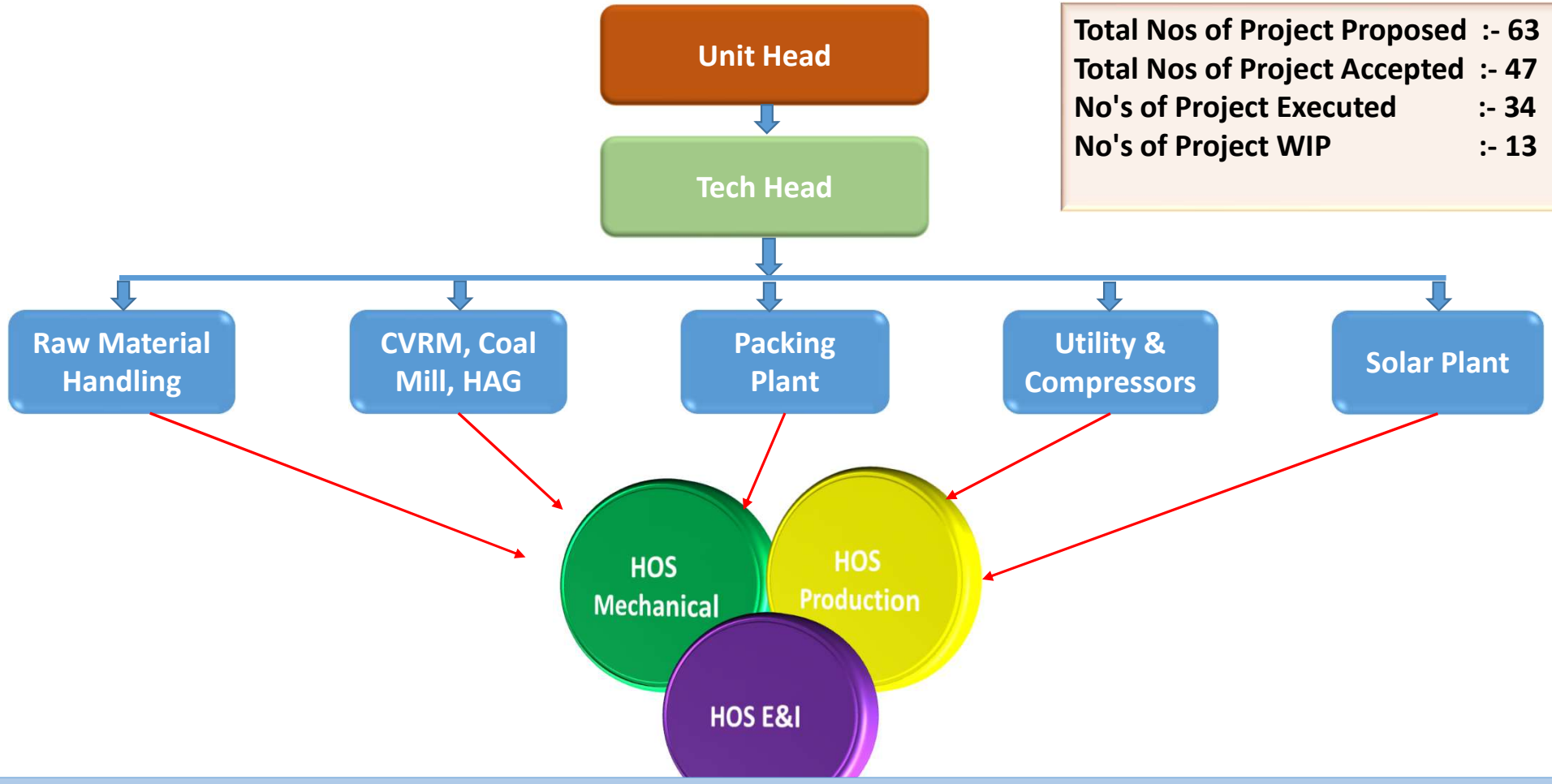
GREENBELT DEVLOPEMENT INITIATIVES

Inaguration of Waste Converter machine by Unit Head Sri Manoranjan Sahoo

- ✓ *The Organic Waste Converter (Model RN 200) is the machine "only of its Kind" and is an unique Initiatives from Kapilas Cement towards better Environment in our surroundings. Beside this it reduces the cost of disposal of waste, helps in creating Zero garbage in township, reduce water pollution and protect wildlife.*
- ✓ *"Automatic RNATURE " OWC machine is a fully automatic and highly compact composting machine which use special microorganism to break down and decompose all kinds of organic waste into compost within 24 to 36 hrs with a volume reduction of 85-90% . The Process is noiseless.*
- ✓ *The food and garden waste generated from kapilas tower, Canteens and labour colonies and landscape areas inside plant and colony around 180 kg /day will be converted into Organic compost By OWC machine , later the compost will be utilised in Organic vegetable cultivation through soil application at Ratio of 1:10.*

Approach For Energy Conservation Initiatives towards Excellence

Core Committee Team-Energy Cell



Total Nos of Project Proposed :- 63
Total Nos of Project Accepted :- 47
No's of Project Executed :- 34
No's of Project WIP :- 13

Best Practices in Green Supply Chain

- Reverse Logistics in Raw Material Trucks (Hywa) implemented
- Eye on Wheels – Reduce Truck Turn around Time (TAT) from 8 hours to 4 hours
- Maximised Bulk Cement Dispatches

KAPILAS CEMENT MANUFACTURING WORKS

(A Unit of OCL India Ltd.)

OFFICE ORDER

Awards & Accolades

Two Consecutive times Awarded First Prize in Cement Sector in India in National Energy Conservation Award,BEE, Govt of India, 2018 and 2021

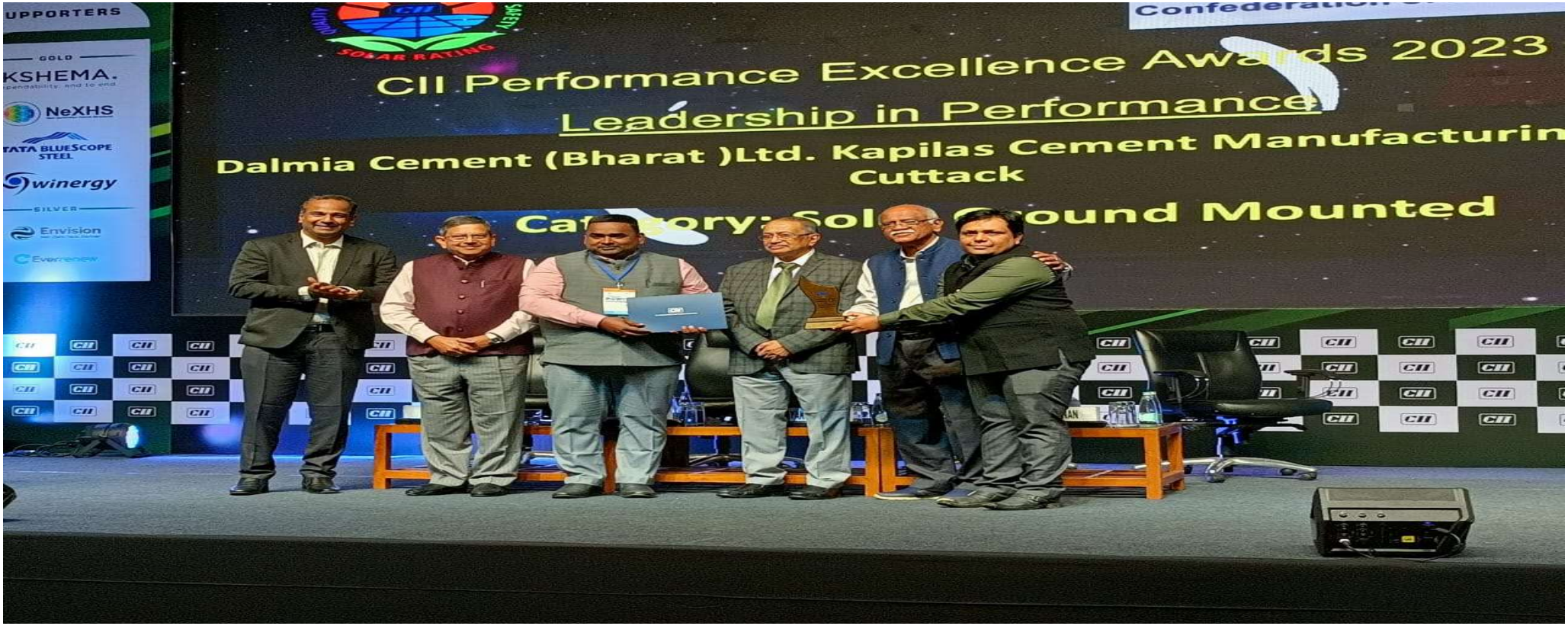
AWARDS & ACCOLADES

Awarded Energy Efficient Unit Award by CII National Energy Management Summit, held at Hyderabad

Awarded Excellent Energy Efficient Unit Award by CII National Energy Management Summit, held at Hyderabad

Awarded Excellent Energy Efficient Unit Award by CII National Energy Management Summit, held at Hyderabad

Awards & Accolades



CII Performance Excellence Awards 2023 for Solar Power Plant

"Platinum Green Co" Certification Awarded by CII to KCMW

"Kapilas Cement Manufacturing Works ***awarded "Platinum Green Co" certification by CII recently, Being the 1st Unit in the country in Cement sector obtaining Platinum Rating.***

*" **Green Co Certification** signifies the initiatives to reduce their ecological footprint, in several areas such as energy efficiency, water, GHG & waste reduction"*


CII - Sohrabji Godrej Green Business Centre

hereby certifies that

Dalmia Cement (Bharat) Ltd

Kapilas Cement Manufacturing Works

has successfully achieved the standards as required for the following level of certification under the GreenCo - Green Company Rating System which is valid for a period of 3 years

GreenCo Platinum

June 2020

Jamshyd N Godrej, Chairman, CII-Godrej GBC
Pradeep Bhargava, Chairman, GreenCo Rating System
L S Ganapati, Chairman, GreenCo Assessor Panel
K S Venkatagiri, Executive Director, CII-Godrej GBC

CII – IGBC Green Building Platinum Award

Salient Green Features of OCL Kapilas Residential Project:

- ***Energy Efficient Building Envelope***
- ***Energy Efficient Heating, Ventilation & Air-Conditioning System***
- ***Energy Consumption Monitoring*** *Using Sub-metering*
- ***Adequate Indoor Air Quality***
- ***Adequate Landscape Area*** *(> 30% of the total site area)*
- ***Adequate Day lighting*** *within all regularly occupied spaces.*
- *Designed for* ***Differently Abled People.***
- ***Waste Management Practices*** *adopted.*
- ***Water Efficient Plumbing System*** *(>40% water cons. reduction)*
- *100%* ***Use of STP treated water*** *for flushing & Greenbelt*
- ***Use of FSC certified wood based material*** *(>80% wood based material).*
- *Implementation of* ***No Smoking Policy*** *within all building blocks*
- *Use of* ***CFC/HCFC Free HVAC and Fire Suppression System***

Awarded IGBC Green Building
Platinum Award with rating of 87 points


YOU SEE GREY?
WE SEE GREEN.
Our plants produce the World's Greenest Cement". It's no coincidence that we were the first company globally to be part of the RE100 and EP100. This characteristic innovation-led approach has not only made us the fastest growing cement major in India but also helped us fulfil our responsibility towards ensuring growth that's right for the country.
Dalmia
Bharat Limited
www.dalmiabharat.com


Thank You!


Save Energy


Q&A