Kapilas Cement Manufacturing Works
A Dalmia Bharat Group Company

Dalmia Bharat Group

A GREEN PRO CERTIFIED CEMENT

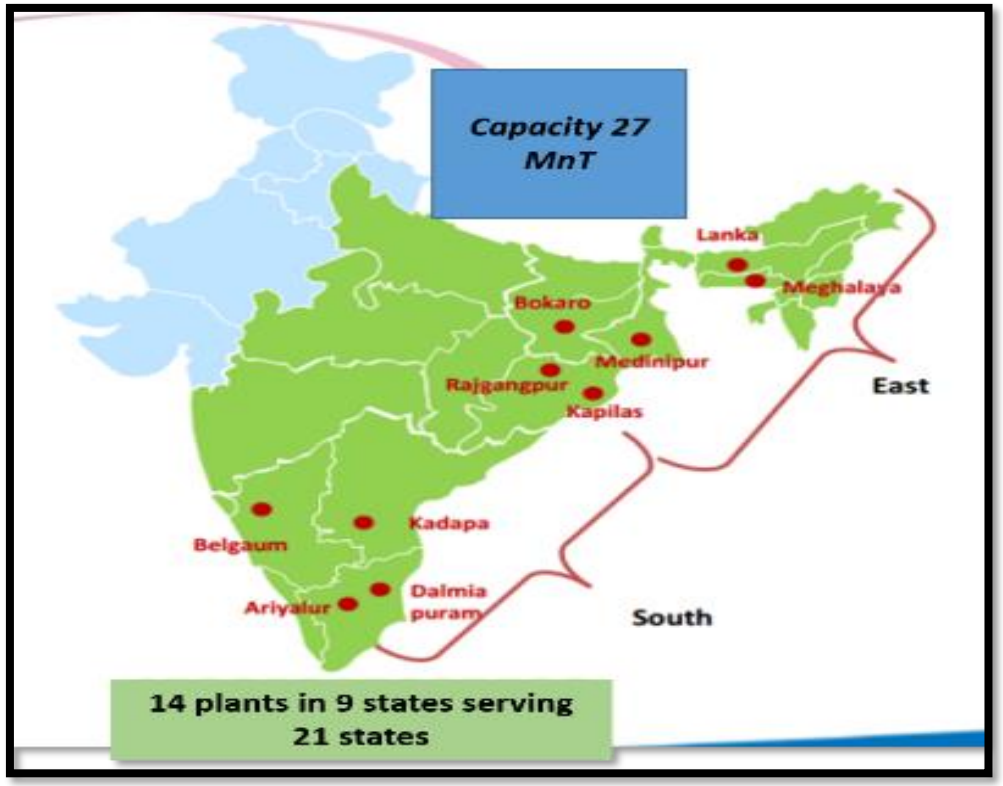
Hearty Welcome to All

21ST National Award for Excellence in Energy Management

24th Aug – 27th Aug, 2021

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

BRIEF INTRODUCTION



- ✓ ***4th Largest Cement Manufcturer in India***
- ✓ ***27 Mn Ton of Installed Cement capacity***
- ✓ ***178 MW of Thermal Captive Power Plant***
- ✓ ***9.2 MW Solar Captive Power Plant &***
- ✓ ***21 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 1.7 MTPA*** *in Odisha, commissioned* ***on 28th March, 2008.***
- ***A Captive Solar PV Power Plant of 2.5 MW commissioned on 28th March, 2014, operating under REC mechanism.***
- *Presently operating a* ***LOESCHE VRM (LM 56.3+3 CS) with 1.70 MTPA capacity*** *for Clinker and Slag grinding separately.*
- *Presently* ***Expansion of our Plant from 1.70 MTPA to 4.2 MTPA by installing another Cement Mill of 2.5 MTPA*** *completed in June,2021.*
- *Planned to set-up another* ***Ground mounted 17.6 MW Solar PV Power Plant in FY 21 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

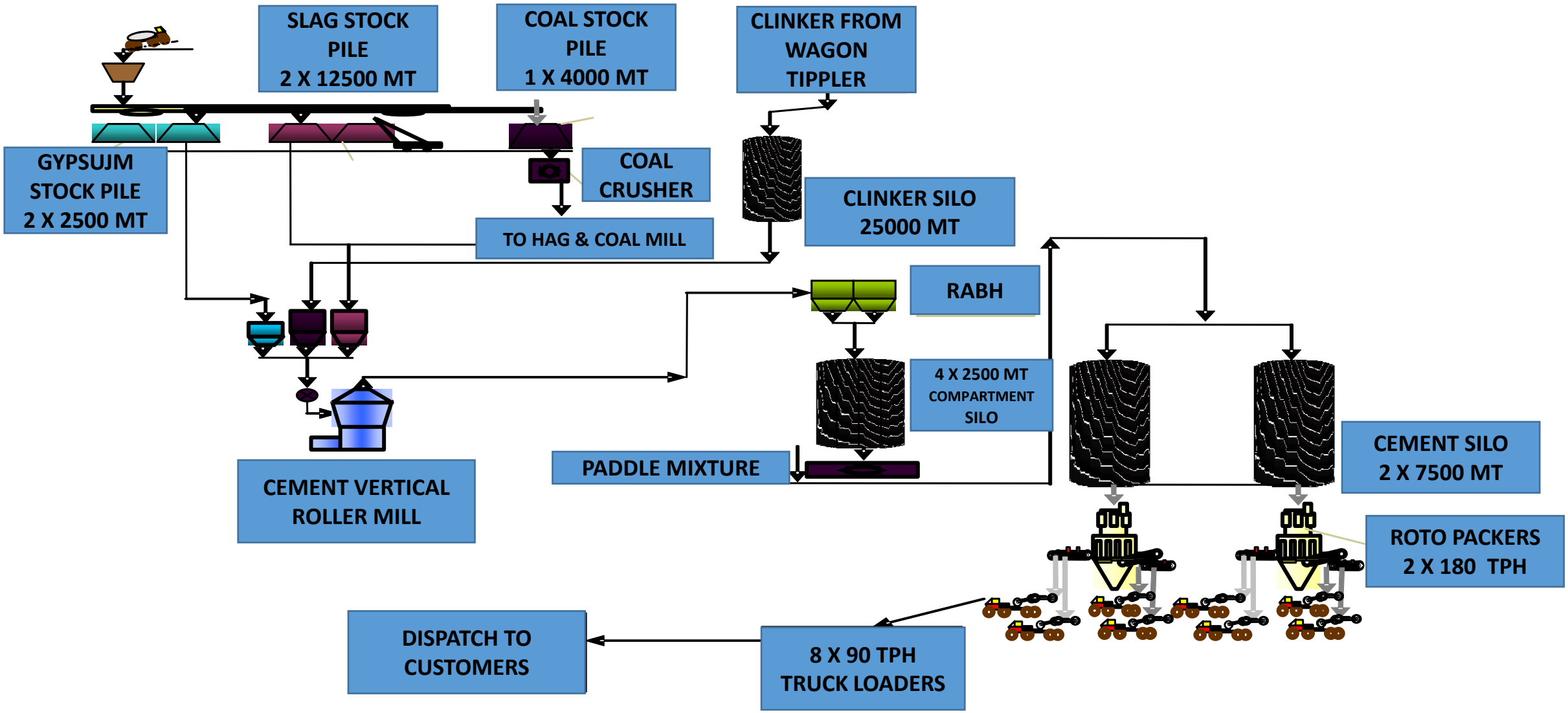
Certification for IMS (QMS, EMS, OH & S and Energy) from TUV NORD

MAJOR ACHIEVEMENTS IN SUSTAINABILITY

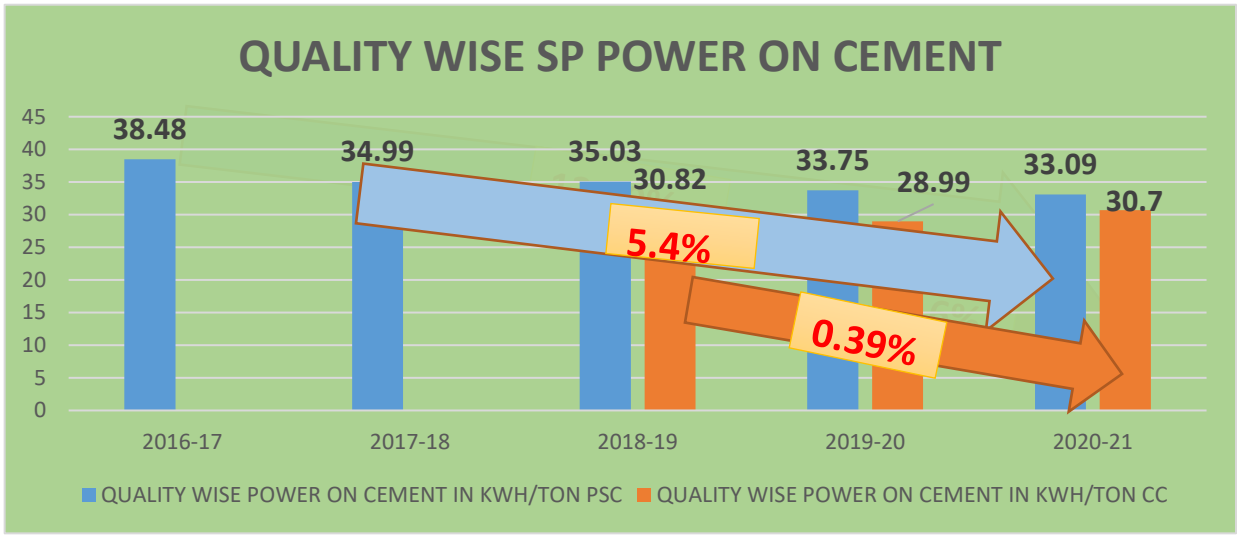
Several innovative projects undertaken to achieve following milestones:

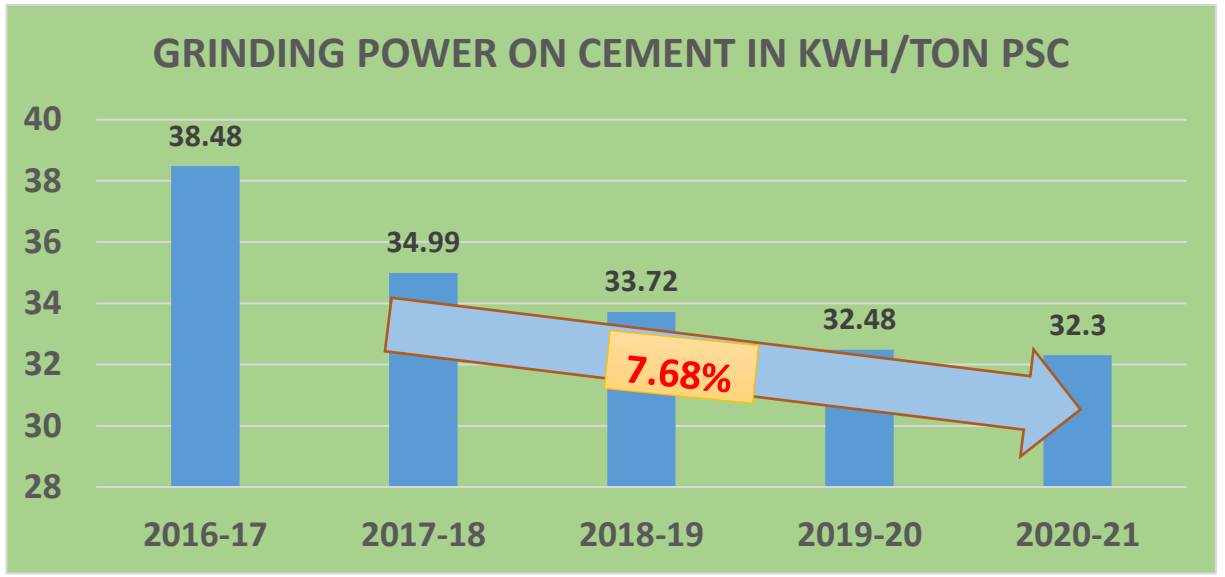
- ✓ 3.38%, 6.82% & 7.46% **reduction of Electrical Energy** in the year of 2018-19 (34.83 KWH/T), 2019-20 (33.59 KWH/T) & 2020-21 (33.36 KWH/T) over 2017-18 (36.05 KWH/T).
- ✓ 3.12 %, 41.9 % & 43.19% **reduction of Thermal Energy** in the year of 2018-19 (77.6 Kcal/Kg cement), 2019-20 (46.5 kcal/kg cement) & 2020-21 (45.5 kcal/kg cement) over 2017-18 (80.1 kcal/kg cement).
- ✓ 6.37 % & 7 % of the **total power consumption substituted by Solar Power** in FY 20 & FY21 respectively. 6% of power replaced from GTAM market i.e from solar , wind, hydro, biomass.
- ✓ 83 % of the **total power consumption substituted by Open Access from our own GPP(WHRS)** in FY 19-20.
- ✓ 1.69 %, 9.9% **reduction in Carbon Foot Print** in FY 2019-20 (407 KgCO2/ton),FY 2020-21 (383 KgCO2/ton) over 2018-19 (414 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.

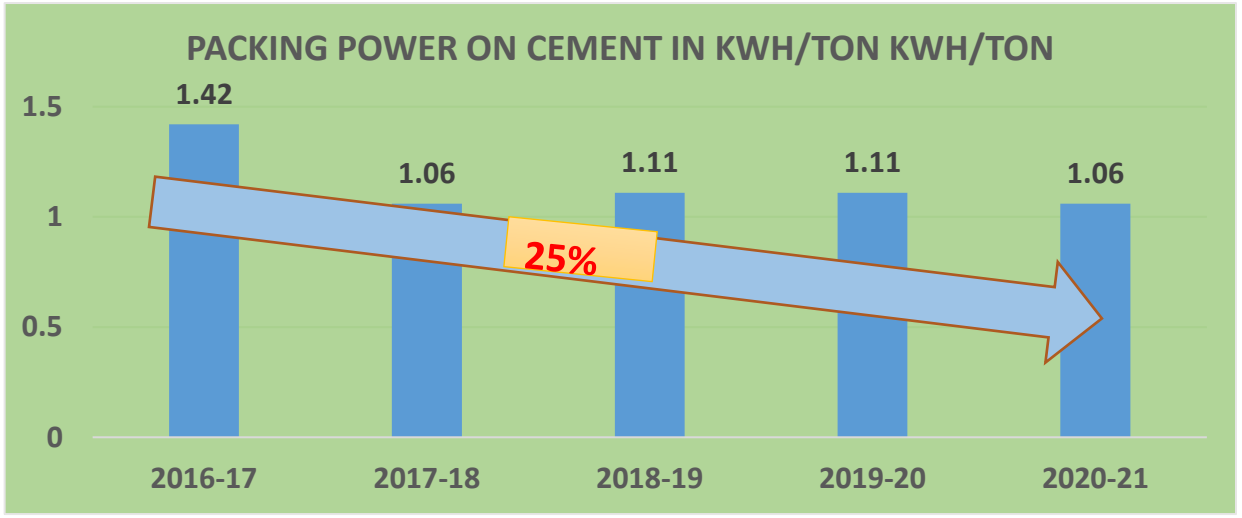
Process Flow Diagram- Cement Manufacturing

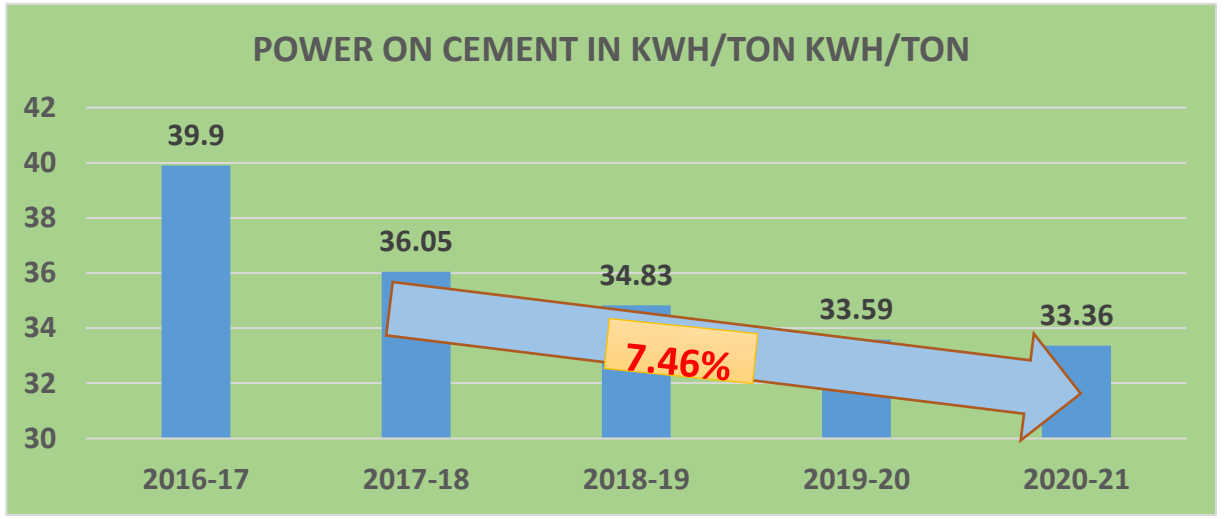


Benchmark: Where We Are ..Where To Go...









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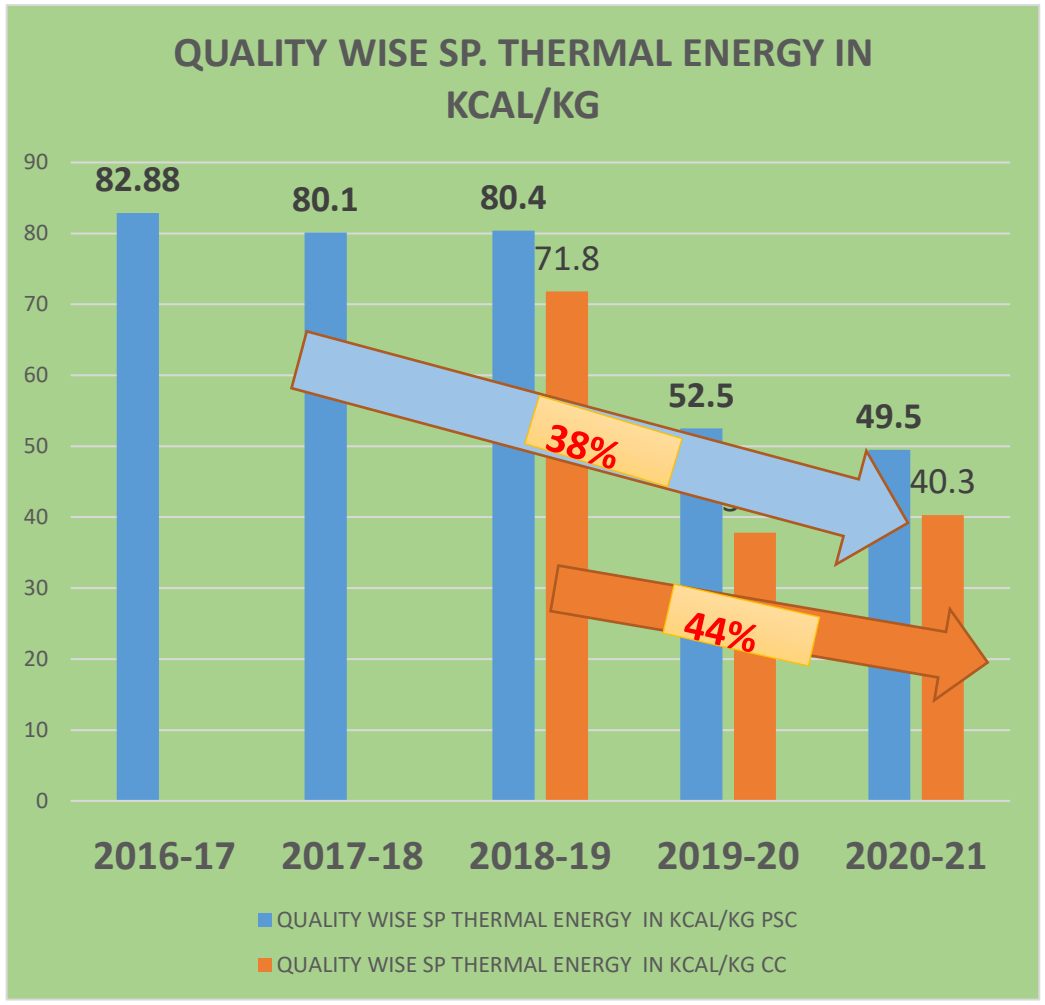

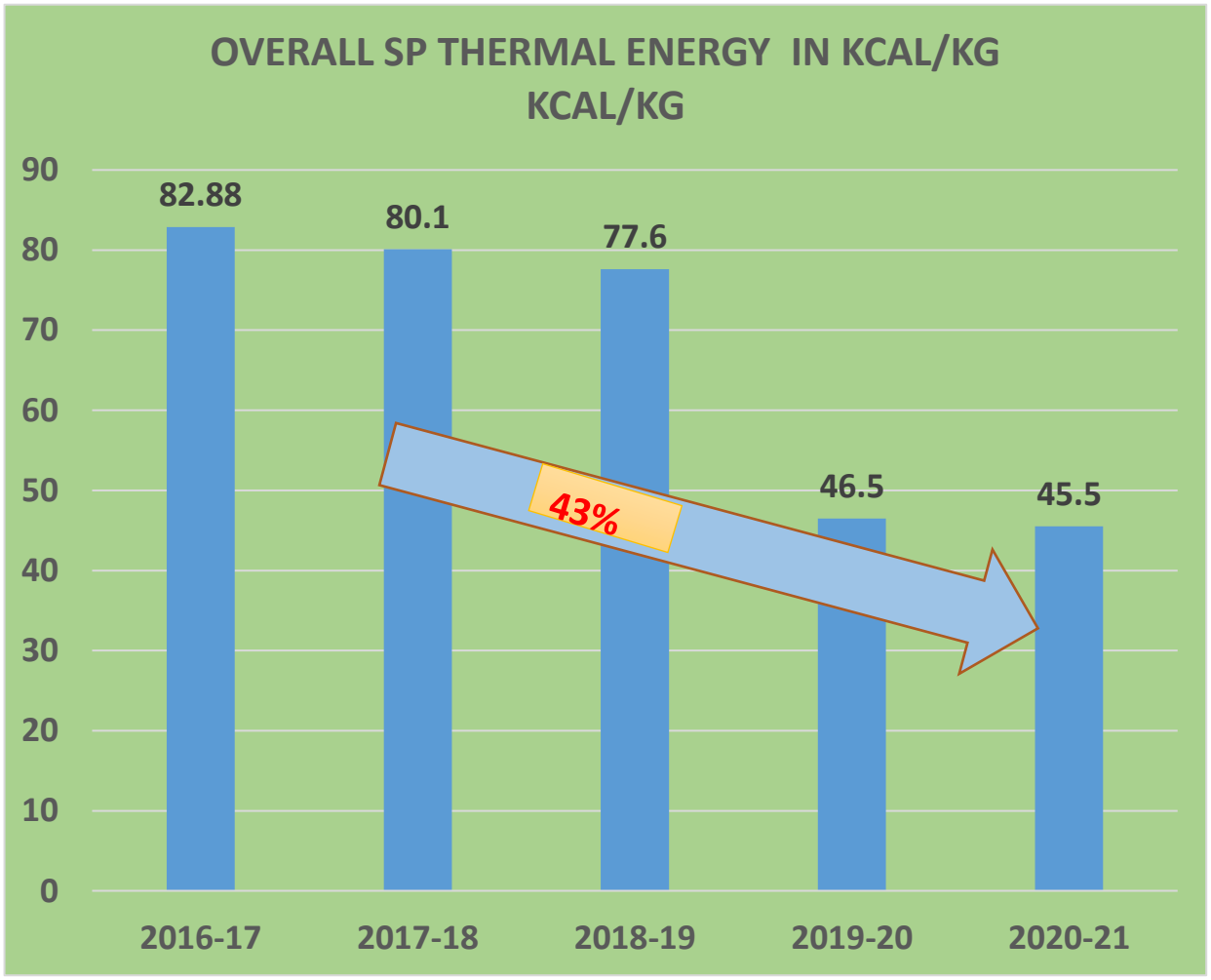

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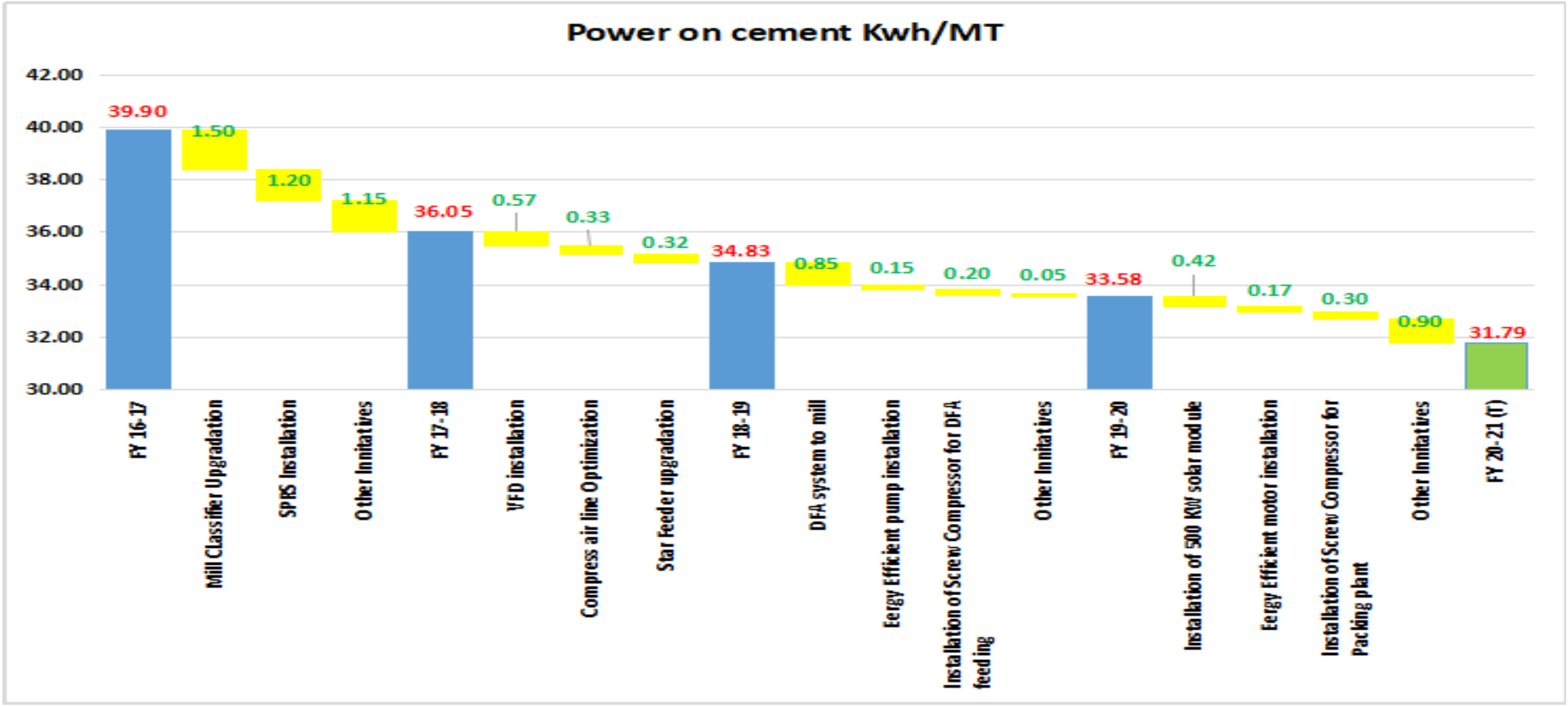

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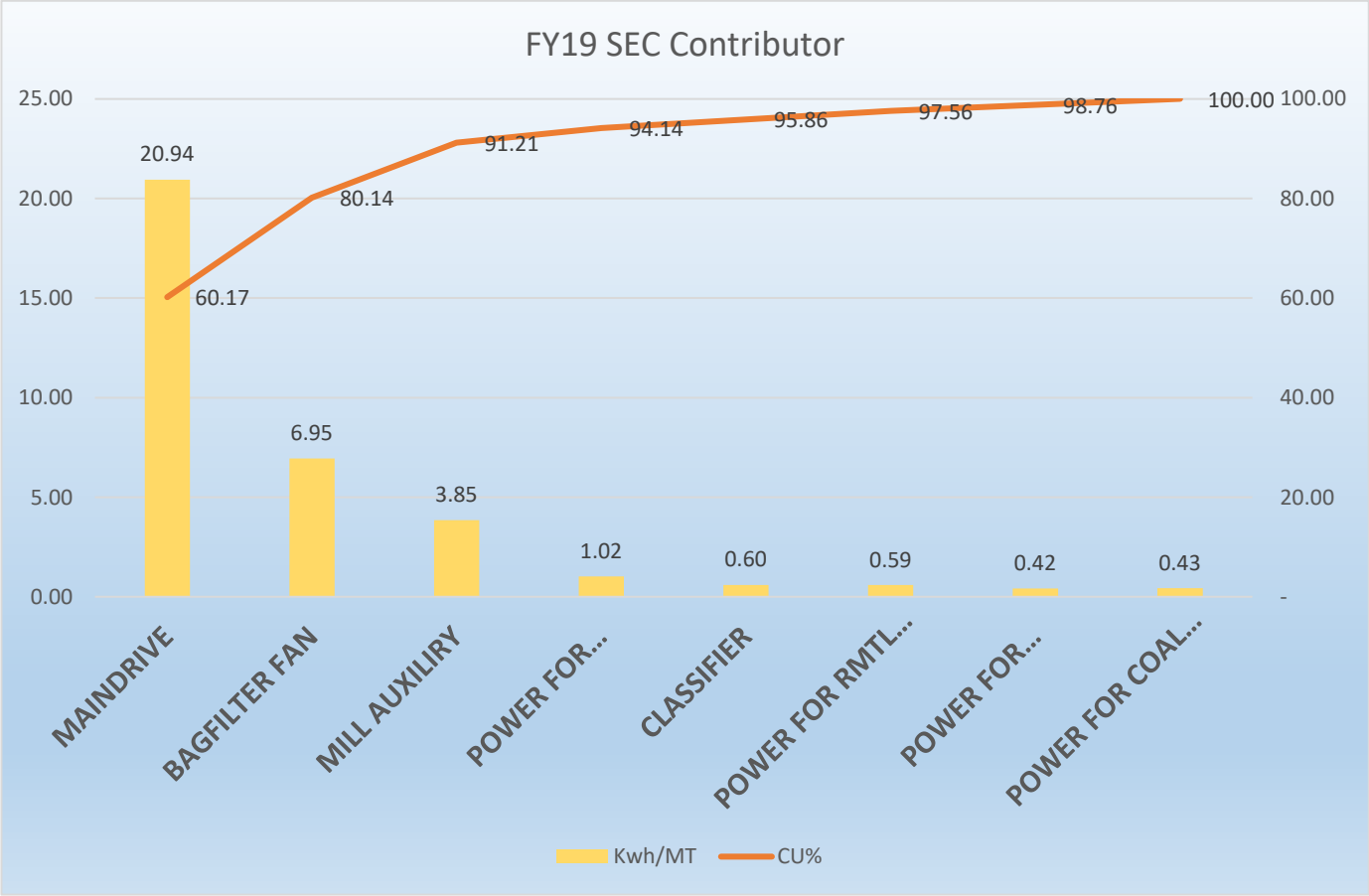
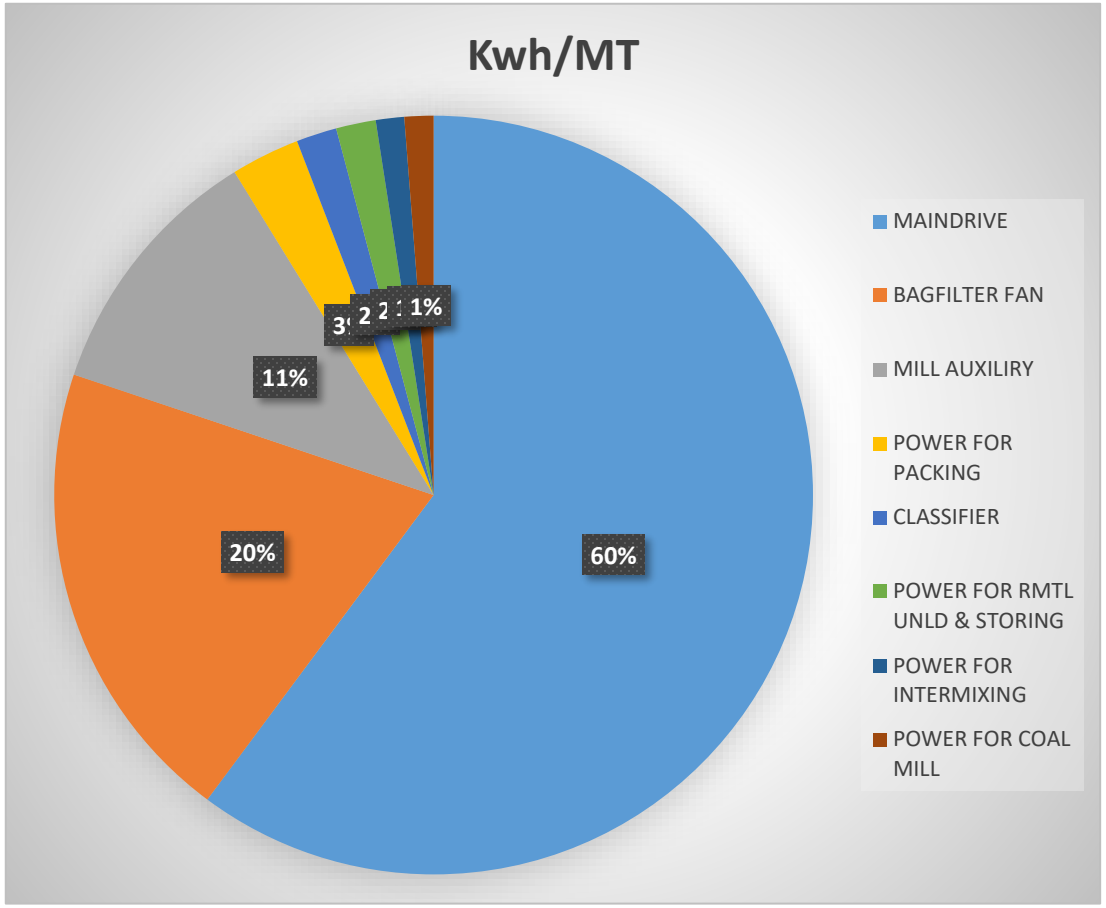




ENERGY CONSERVATION PROJECT IMPLIMENTED

No of Project Completed		40 Nos.
Cost Saving Achieved		708.74 INR Lacs
Electrical Energy Saved		85.79 Lacs kWh
Thermal Energy Saved		18886 M Kcal
Project With Nil Investment		23 Nos
Investment Made		201 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	18-19	4.53	27.1
2	Optimization of Compressor air use and stopping of two numbers of Auxiliary compressor	18-19	1.81	10.9
3	Switching off two no's of distribution transformer	18-19	0.44	2.64
4	Conversion DELTA TO STAR for 10 no's of motors	18-19	4.53	27.2
5	Replacement of 11 no's of under loaded motors with lower capacity motor	18-19	7.55	45.3
6	Running of one Bag House compressor for total plant and stopping all auxiliary compressor.	18-19	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.	19-20	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*	*2019-20*	*0.25408*	*1.52448*
9	*Reduction in tippling time of wagon tippler by increasing SAC speed from 0.2 to 0.3 m/s, tippling angle reduced from 150 to 140 deg.C., JCB used for breaking of lumps, thus SP power cons reduced*	*2019-20*	*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.*	*2019-20*	*0.47640*	*2.85840*
11	*Developing system for running hour monitoring of compressor, belt conveyor, ID fan motor, highlighting increase of idle running*	*2019-20*	*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 deg*	*2019-20*	*0.31760*	*1.90560*

Energy Conservation Actions : Without Investment

No	Title of Project	Year	Annual Electrical Saving (Lacs kWh)	Annual Electrical Saving (INR - Lacs)
13	*Replacement of L11BC4 from 200 Kw to 160 KW, coal weighfeeder agitator motor 2 no.s from 3.5 to 2.2KW, compressor colling blower from 5.5 to 3.75 KW,*	*2020-21*	*0.45*	*2.7*
14	*Modification for running interlock of packing palant bag filter fan wrt to discharge belt*	*2020-21*	*0.67*	*4.02*
15	*Stopping of Air conditioner system of MCC wrt to plant*	*2020-21*	*0.17*	*1.02*
16	*Providing interlock for stopping of main drive and ID fan motor incase of idle running i.e feed stop*	*2020-21*	*1.7*	*10.2*
17	*Stacker belt speed interlock modified from 80% to 40% incase of coal unloading from Truck tippler*	*2020-21*	*0.20*	*1.2*
	TOTAL SAVINGS (Without Investment) - A		**33.057**	**198**

Energy Conservation Actions : Without Investment

No	Title of Project	Year	Annual Thermal Saving (M KCal)	Annual Thermal Saving (INR - Lacs)
18	*Slag to be stored in shed in rainy season & to be stored in outside shed in summer season for reduction in heat consumption*	*2017-18*	*4947*	*50.98*
19	*Reduction of False air Across the system limited to 12%*	*2017-18*		
20	*Master roller sealing arrangement for restriction of false air*	*2017-18*		
21	*Reduction on coal mill residue on 90 Micron*	*2017-18*		
22	*Reduction in mill inside water spray*	*2017-18*		
23	*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*	*2019-20*	*4655*	*47.14*
	TOTAL SAVINGS (Without Investment) - B		***9602***	***98.12***
	TOTAL SAVINGS (Without Investment) A+B (Electrical & Thermal Energy)			***296***

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*	18-19	0.85	5.1	4
2	*3 no's of VFD installation for packing plant bag filter fan*	18-19	1.81	10.9	10
3	*Replacement of 300 no.s of 70watt HPSV lamp with 32watt LED lamp*	18-19	0.53	3.2	5.1
4	*Louver ring design modification*	18-19	2.93	17.6	11.5
5	*Replacement of existing RAL by 400x400mm against 300X300mm of Wagon tippler bag house*	18-19	0.36	2.2	4.5
6	*Capacity up gradation of OPC air slide of MC silo*	19-20	1.51	9.1	2
7	*Screw Compressor to be installed alongwith a Dryer (spare Compressor of BCW to be used)*	19-20	4.5	27	10
8	*Installation of 11KW, 12 RPM starfeeder Geared motor in place of 7.5 KW, 8 rpm geared motor.*	19-20	10.91	65.46	8
9	*Installation of screw compressor for Fly ash unloading earlier it was done by reciprocating compressor.*	19-20	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	2019-20	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	2019-20	10.98	65.88	10
12	Installation of screw compressor of 160 KW replacing 250 KW reciprocating compressor, resulted into saving	2020-21	0.95280	3.2	5.1
13	Installation of VFD for mill feeding circuit bag filter	2020-21	4.5	27	10
14	Installation of belt weigher system in all feeding circuit	2020-21	10.91	65.46	8
15	Installation of 25 KW additional solar module with the scrap material available	2020-21	0.43	2.58	6.25
	TOTAL SAVINGS (With Investment) – Electrical Energy		**52.74**	**313.95**	**106.45**

Energy Conservation Actions : With Investment

No	Title of Project	Year	Annual Thermal Saving (M KCal)	Annual Thermal Saving (INR - Lacs)
16	*Coal Mill grinding element replacement as per energy audit*	*2018-19*	*1935*	*21.44*
17	*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*	*2019-20-21*	*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)*
85.79	514.74	18886	194	201

Energy Conservation Actions : FY20

No	Year	Title of Project	Annual Electrical Saving (kWh)	Annual Thermal Saving (Ton/year)
1	2021-22	Installation of 500KW module with exisitng solar power system	700000	0
2	2021-22	Installation of 17.6KW Ground mounted Solar CPP	23600000	0
3	2021-22	Installation of level sensor for all hoppers	140000	0
4	2021-22	Installation of new energy efficient motrs for the locations where rewinding done for more than 4 times	170000	0
5	2021-22	Replacement of underloaded motors of 7 udentified location	340000	0
TOTAL			**13,84,000**	**0**

Innovative Project: 1

Project: Reduction in specific power of packing plant by in house system optimisation

Objective: Reduction in Specific power Consumption.

Scope:

1. Packing plant main Auxilary bagfilter found runnign at 85% .

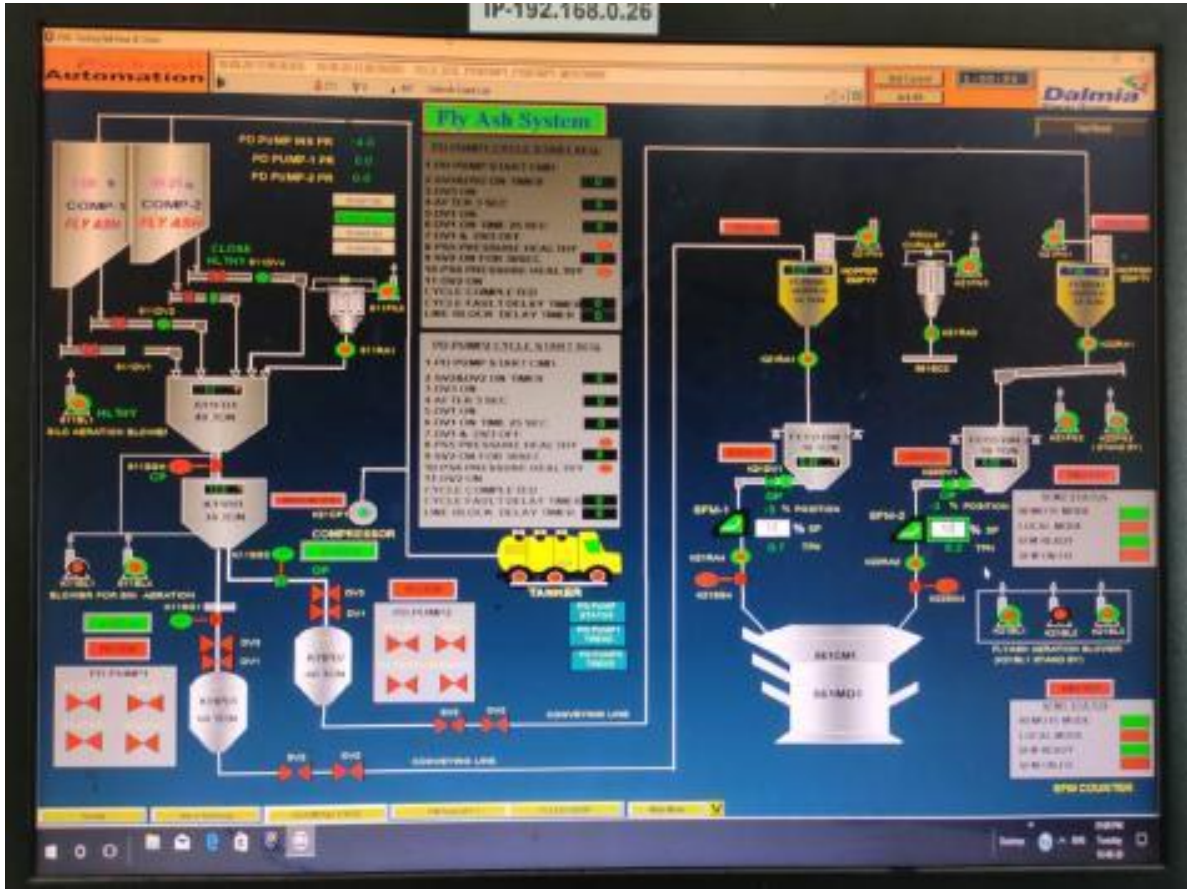
2. We found that even single belt running RPM is fixed.

3. Further we found that raciprocating compressor ruuning in unloading mode .

Action taken :

1. We have given interlock like 50% speed of fan during all the discharge belt stop, 75% speed during single belt running and 85% speed during two belt running .

2. We have interconnected Screw compressor of CVRM section and stopped raciprocating compressor at packing plant.



Benefits :

- Sp power on cement reduced by **0.11 kWh/Ton**

Innovative Project: 2

❖ **Project: Conducted Motor load study and undertook replacement of under loaded motors across the plant**
Objective: Reduction of specific power consumption.

✓ **Scope:**

- We have observed that stacker main belt conveyor running less than 50% load during unloading from wagon tippler.Present motor capacity was 200KW.
- We have spare 160KW availabe whose shaft size matching
- Hag coal weigh feeder agitator motor and cooling blower of screw compressor, reject belt conveyor replaced with lower capacity motor with spare motor availabe

✓ **Action taken :**

- Studied the motor running load & replaced with suitable lower KW motor as available in plant

✓ **Benefits :**

- Sp power on cement reduced by **0.7 kWh/Ton**
- Annual Electrical Cost Saving **Rs. 52.8 Lacs**

511 BC-1 Current Reading with 200 KW motor			
SL No	Date	Current	KW=Current*415*0.8/1000, PF=0.8
1	11.04.2017	115	66.13
2	11.04.2017	117	67.28
3	12.04.2017	118	67.81
4	12.05.2017	116	66.70
5	13.05.2017	110	63.25
6	13.05.2017	118	67.85
7	15.05.2017	112	64.37
8	15.05.2017	118	67.81
9	24.05.2017	114	65.51
10	25.05.2017	110	63.25
11	26.05.2017	115	66.13
		Total	**726.10**
		Avg	**66.01**
511 BC-1 Current Reading With 160 KW Motor			
1	29.05.2017	98	56.35
2	30.05.2017	96	55.20
3	31.05.2017	99	56.93
4	01.06.2017	97	55.78
5	01.06.2017	96	55.20
6	02.06.2017	100	57.50
7	02.06.2017	96	55.20
8	03.06.2017	97	55.78
9	05.06.2017	99	56.93
		Total	**336.39**
		Avg	**56.07**

Innovative Project: 3

- **Project: Installation of 25 KW solar module with exisitng solar power plant**
- **Objective: Reduction in Power Consumption.**

Scope:

1) There are degradation in solar module @ 0.7% in each year.

2) So total degradtion till date is 130KW till date.

3) We have spare module availabe at site which capacity is 25 KW.

4) We have old 132KV tower line material availabe laying unused at site.

Action taken:

- We have planned to use the tower material as structure for 25 KW, designed the structure according to the material availabe.
- We have installed spare module availabe at site with new cable , connected the same table to one of the SMB box nearer to table.
- We have moved capex for further installation of solar module.

Benefits：

- Annua electrical energy expected is 43,000Kwh
- Annual Electrical Cost Saving **Rs. 2.58 Lakh/Annum**

Innovative Project: 4

- **Project: Installation of belt weigher system for ram material feeding circuit belt conveyor.**
- **Objective: Reduction in Power Consumption by drcearins running hrs of belt conveyor.**

Scope:

1)It was observed that feeding section belt conveyor were running in less than 50% of it's designed capacity as a result running hrs of entire circuit increases.

2) Slag feeding from reclaimer to hopper running for 16 hrs, clinker feeding to hopper from silo running hrs was 11 hrs.

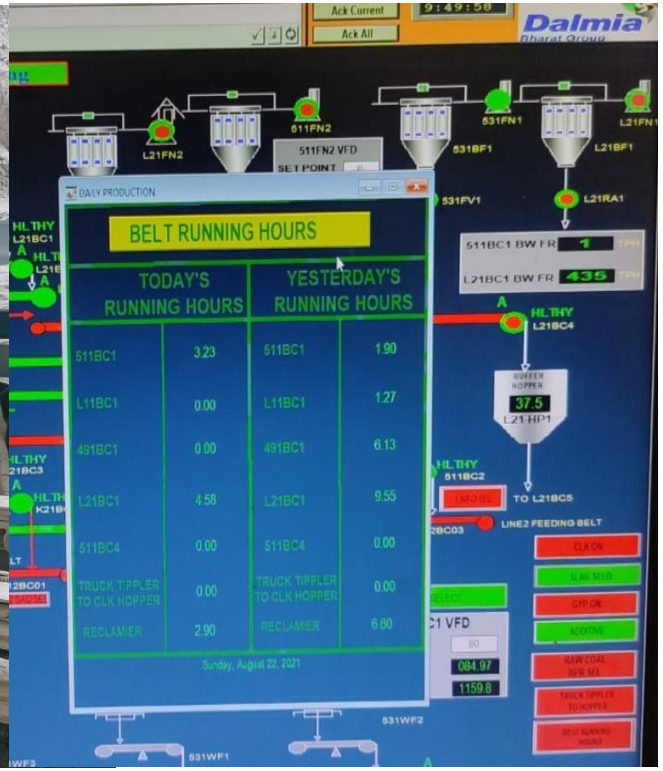
3) There are idle running of bagfilter fan and observed.

Action taken :

1) Installation of belt weigher system done for slag and clinker circuit and TPH counter given in CCR

2) Running hrs counter given in PLC SCADA to moniotr feeding circuit running hrs.

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**

Innovative Project: 5

Project: Zero water utilization in PSC grinding & stopping of one HAG in PSC & DSP grinding.

Objective: Reduction in Heat & power Consumption.

Scope:

CVRM is equipped with two HAG for mill operation. Earlier we were running 2 nos of HAG through out the year. Now we are stopping one HAG in the month Feb-May.

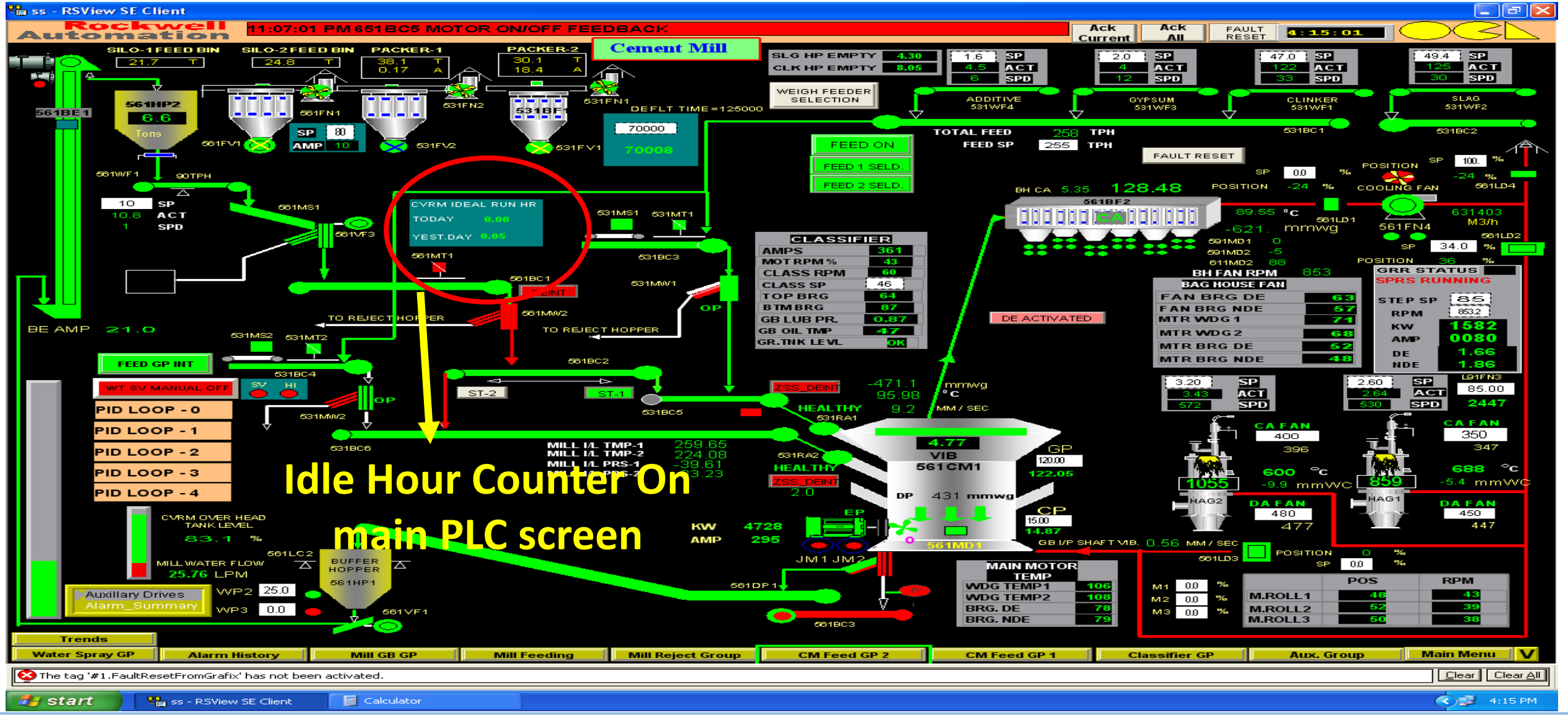
Action taken :

1. Stock piling material management source wise specially in slag.
2. Reduced the mill DP.
3. Optimization of mill outlet temperature as per requirement

Benefits :

- **SP power on cement reduced by 0.2 kWh/Ton**
- **Heat consumption saved during this period 18000 MKcal**
- **Total saving on account of heat & power is Rs. 206 Lakh/Annum**

Idle Running Hour Monitoring

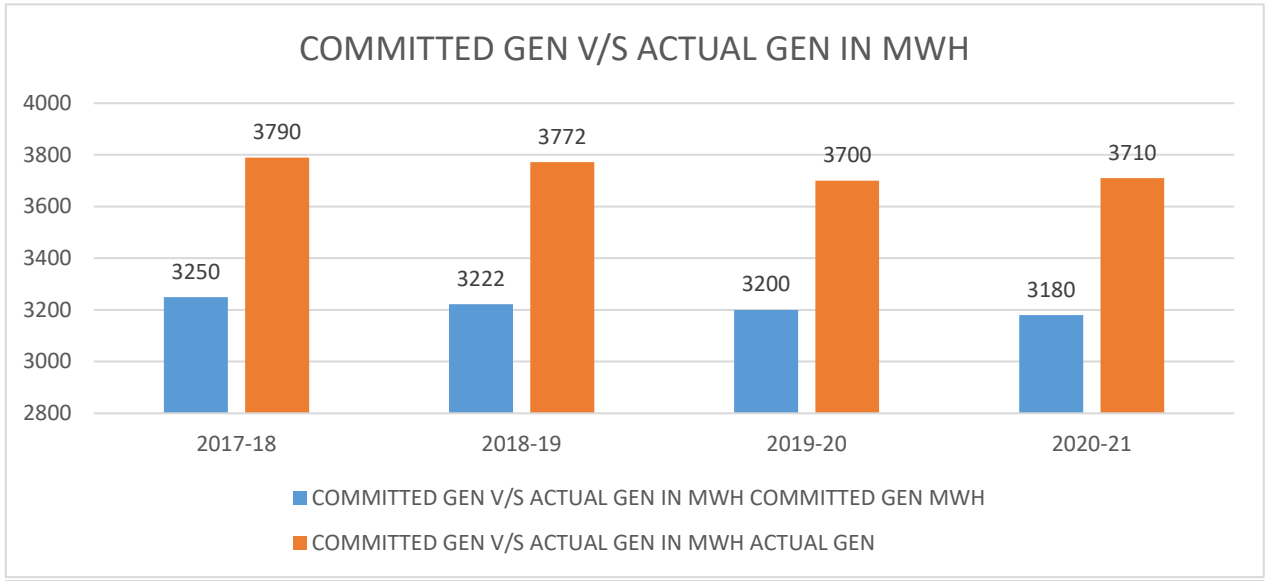


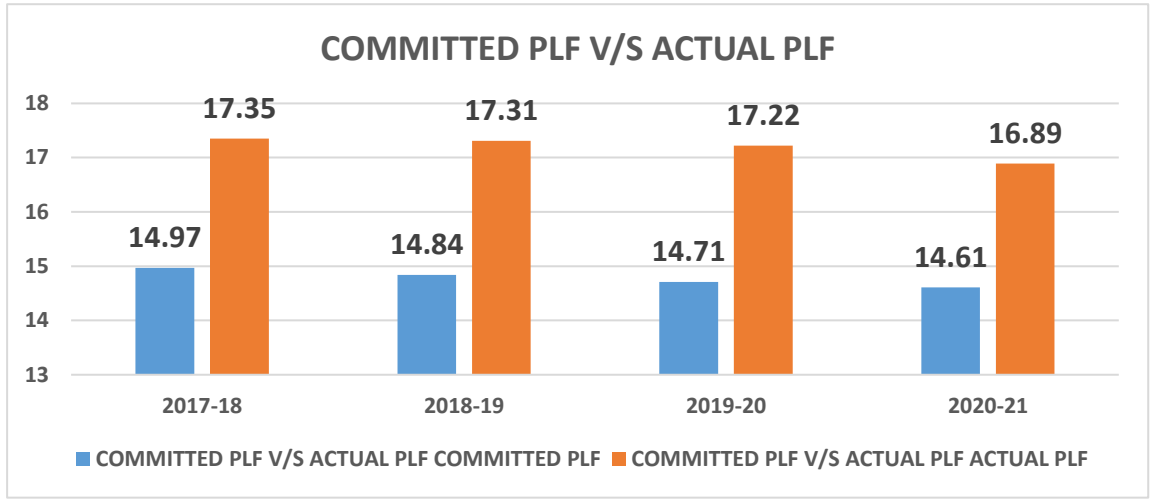
Digitization in Monitoring

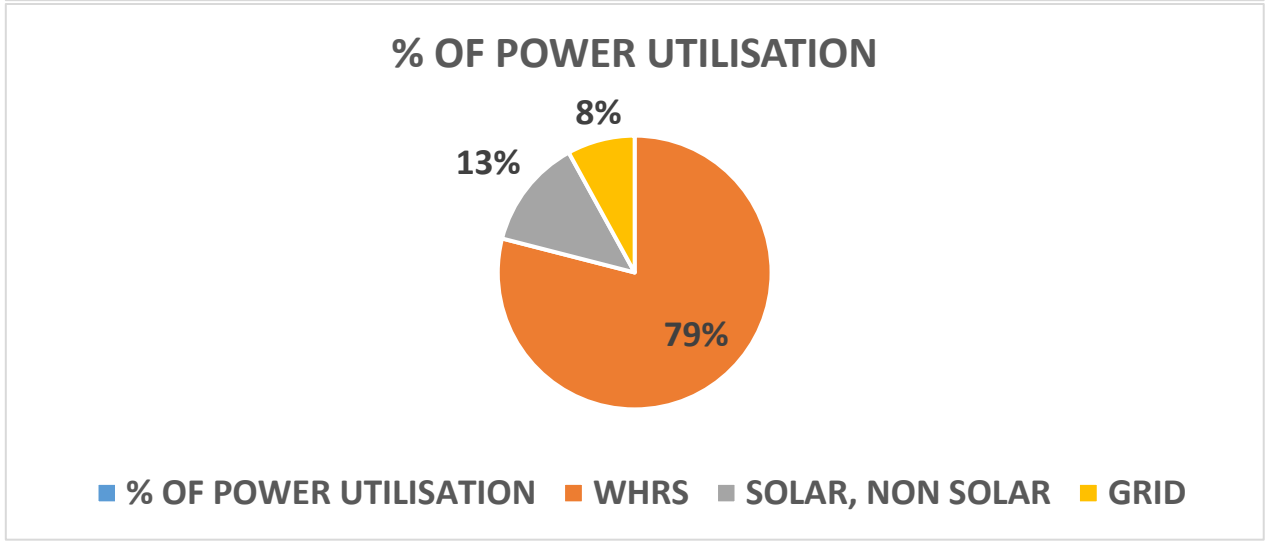
Ewatch system access from Computer

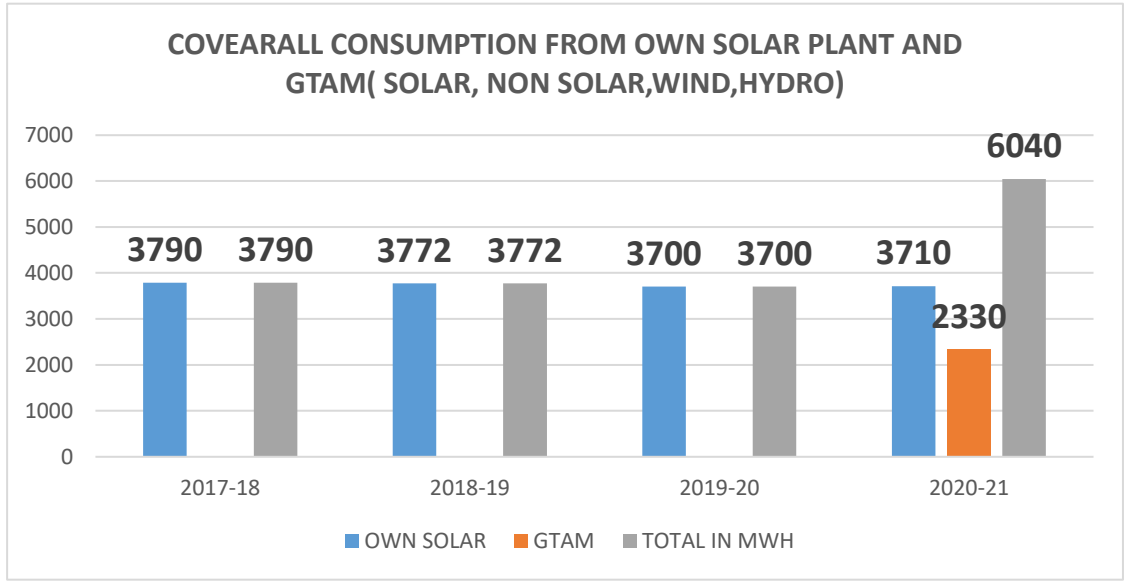
Ewatch system access from Mobile

Renewable Energy Usage From 2.5 MW Solar PV Power Plant









BEST PRACTICES 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 4 cycles in month in KCW instead of 2 Cycles suggested by OEM.
- ✓ *Regularly checking VOC of solar modules on every month and replacing faulty modules*

4 CYCLE CLEANING OF MODULES WITH MODULE CLEANING SYSTEM

MODULES TILTED AT 30 DEG

MODULES TILTED AT 10 DEG

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

Dalmia Bharat Group

- ✓ *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.*

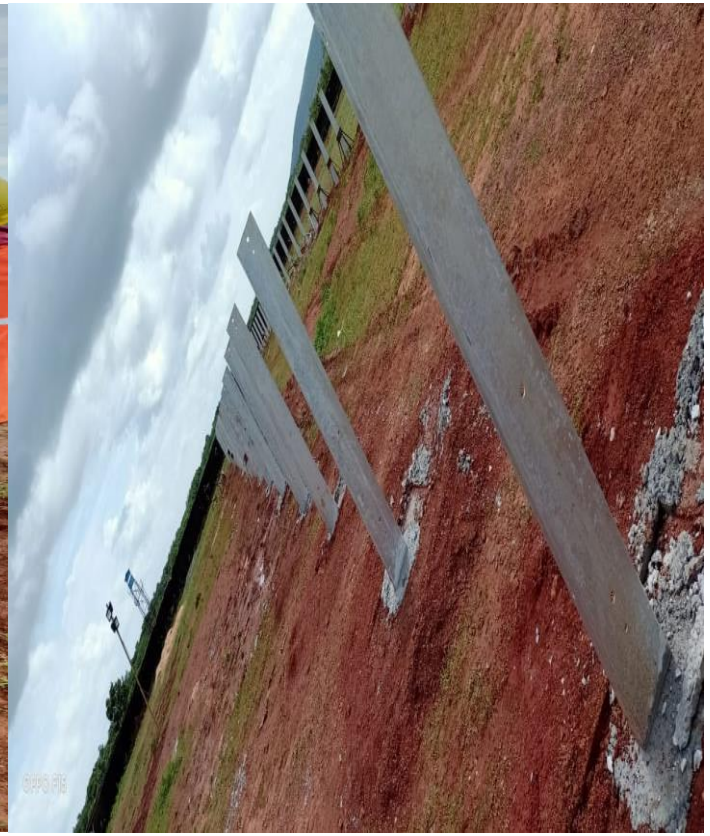
Renewable Energy Usage Continues.....

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

SOLAR PLANT EXPANSION PLAN AT KCW

Sl No	RT/GM	Sites	Area (acres)	Capacity (DC, kWp)	Capacity (AC, kWp)
1	GM	Block B	15.84	5690	4800
2	GM	Block C1	33	11850	9800
		Total	49	17,540	14,600



DCBL – ENVISIONINNG CARBON –ve DALMIA CEMENT

Carbon Negative Roadmap of DCBL…

Dalmia Determined Contributions (DDCs)

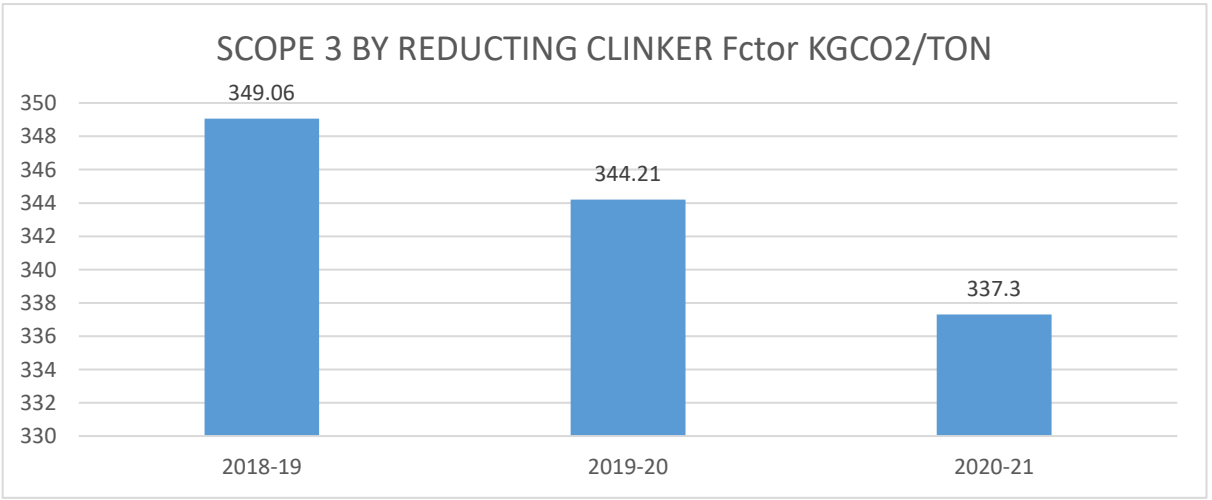
- Switching over to 100% green fuels and power under fossil free initiative (RE 100),
- Reducing clinker factor and heat consumption in incremental stages (EP 100),
- Switch over to solar drying of raw materials (RE 100)
- Development of new low-carbon cements such as LC^3 (innovation)
- Carbon Capture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

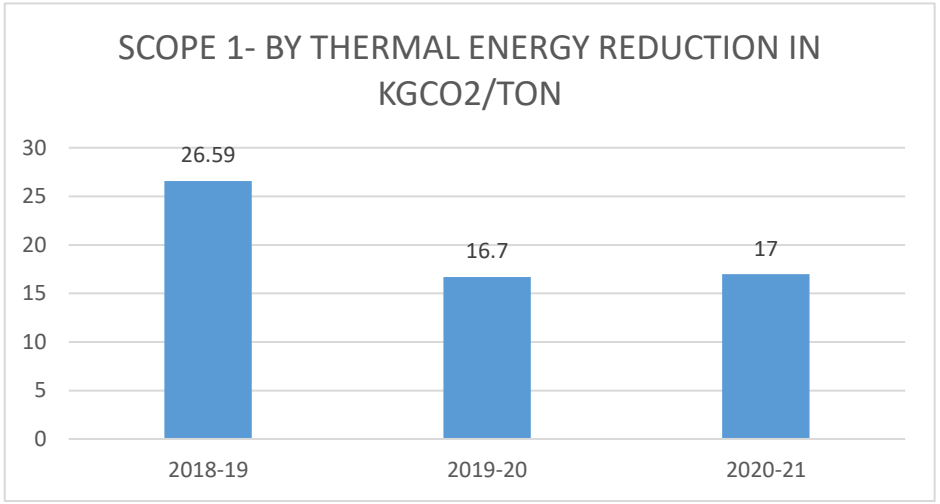
Dalmia Cement announces carbon negative roadmap at Future Economy session invited by Harvard Business Review in San Francisco

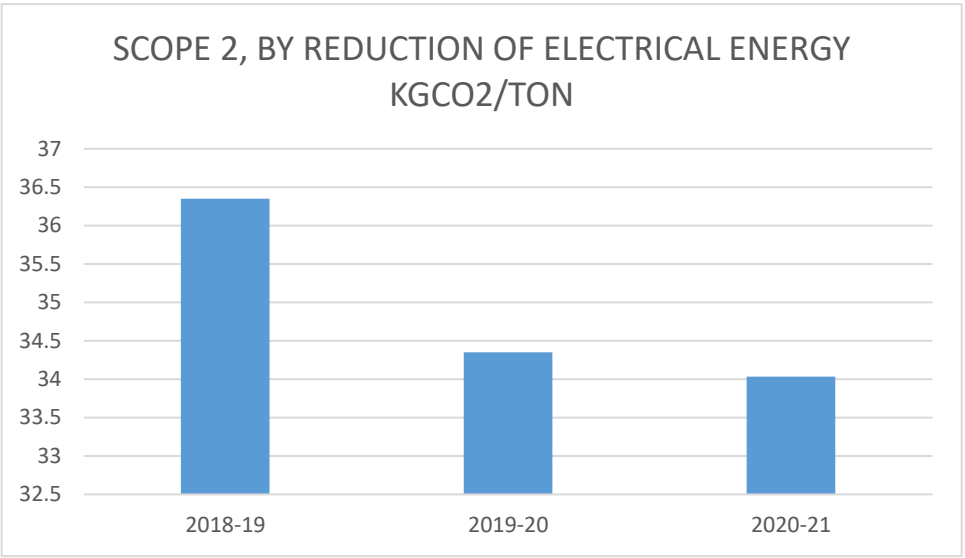
GHG INVENTORIZATION – CARBON FOOTPRINT REDUCTION

❖Initiatives to reduce carbon footprint:

- ✓ *Reduction of thermal energy (Kcal/Kg) by process optimization*
- ✓ *Installation of 2.5 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.*

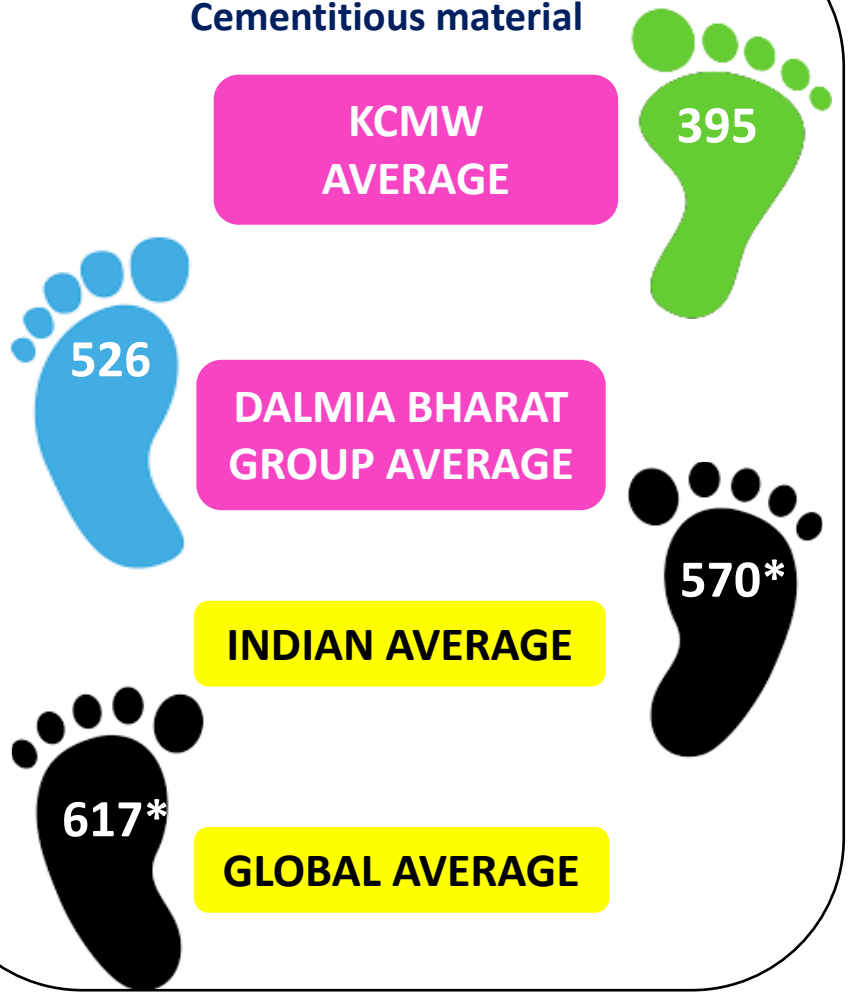






GHG INVENTORIZATION – CARBON FOOTPRINT REDUCTION

Estimated Net CO_2 emissions in kg /ton of Cementitious material

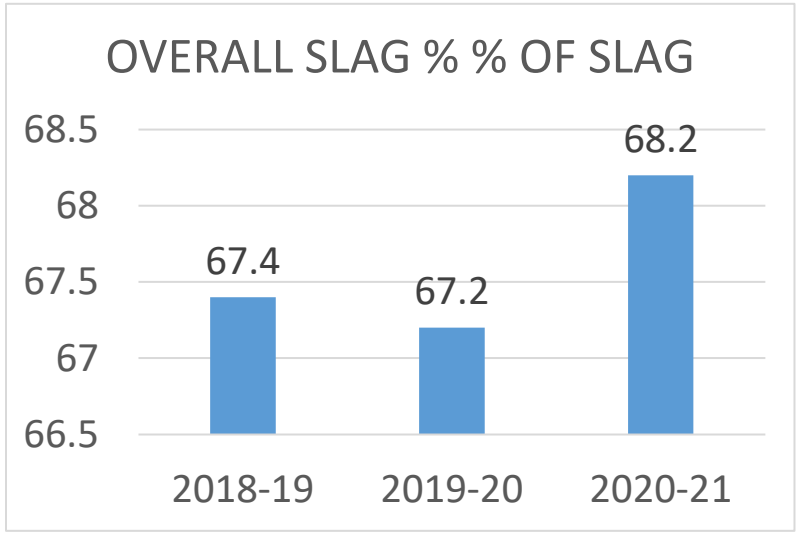


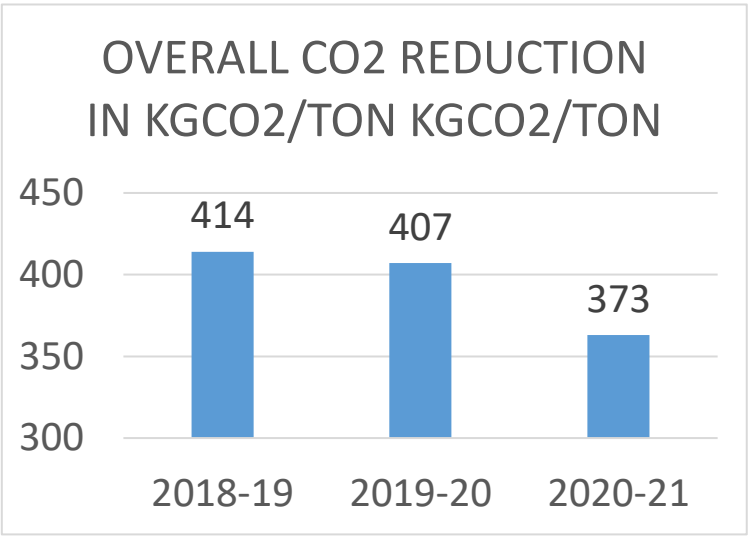
*Based on Cement Sustainability Initiative (CSI) GNR data published in Year 2017.

❖ **Initiatives to reduce carbon emission :**

- ***Increase in use of B F Slag %***
- ***Journey started with 43.5% in year 2013 to 67.4% in Year 2019***

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



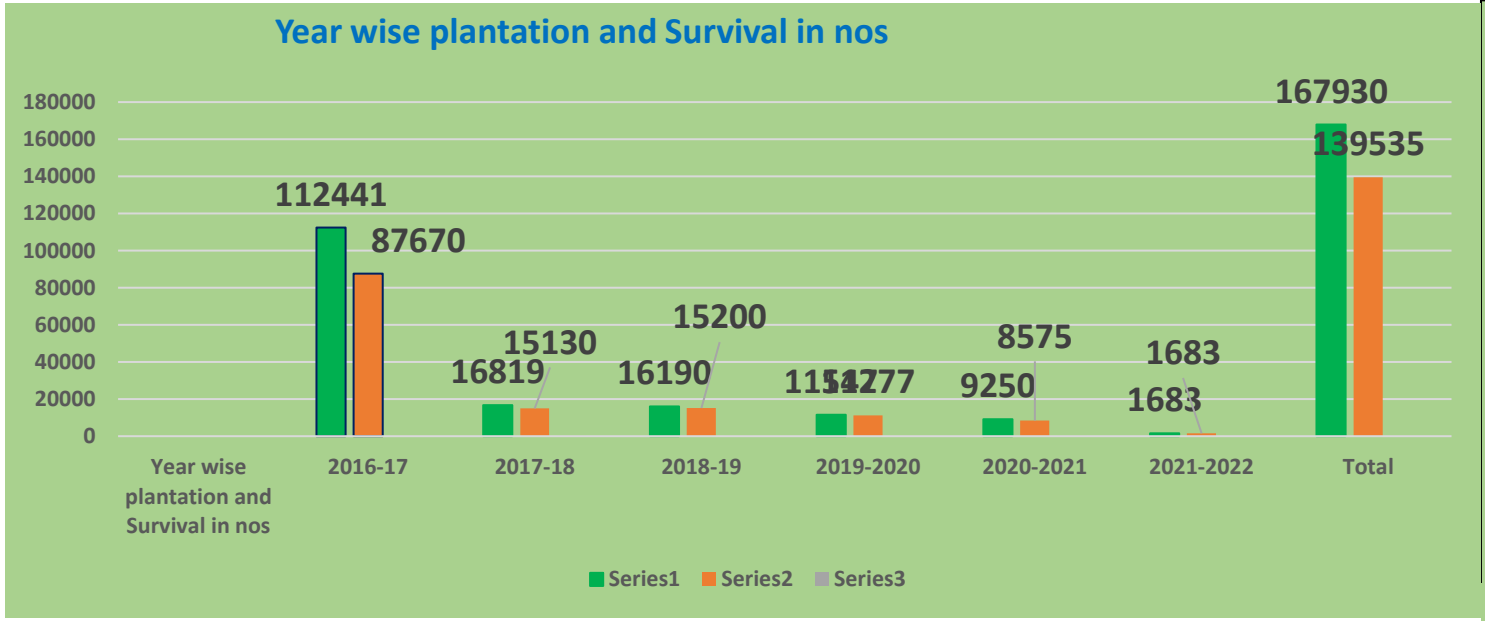


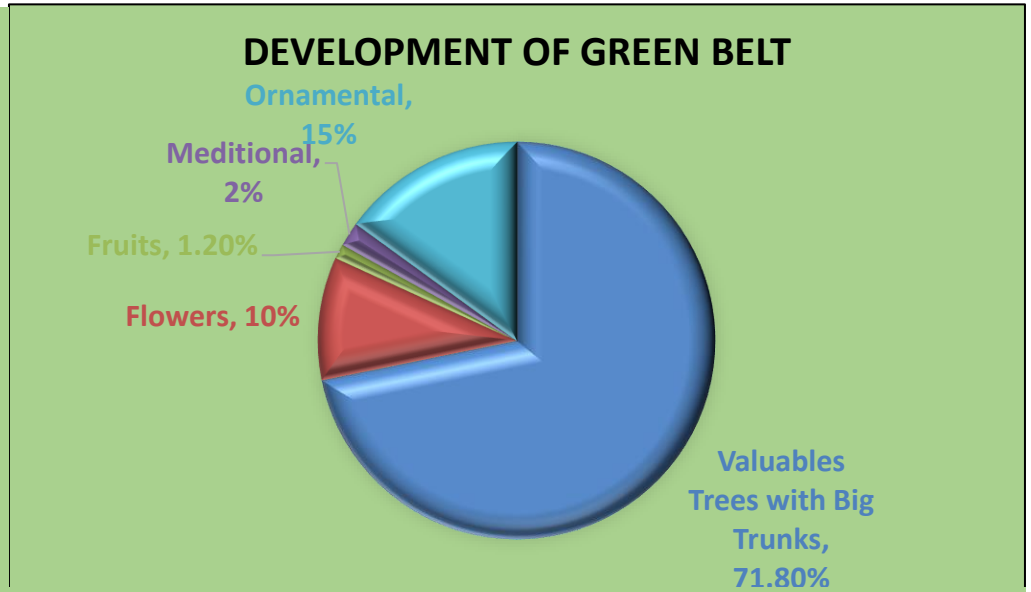
GHG INVENTORIZATION – CARBON FOOTPRINT REDUCTION

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.

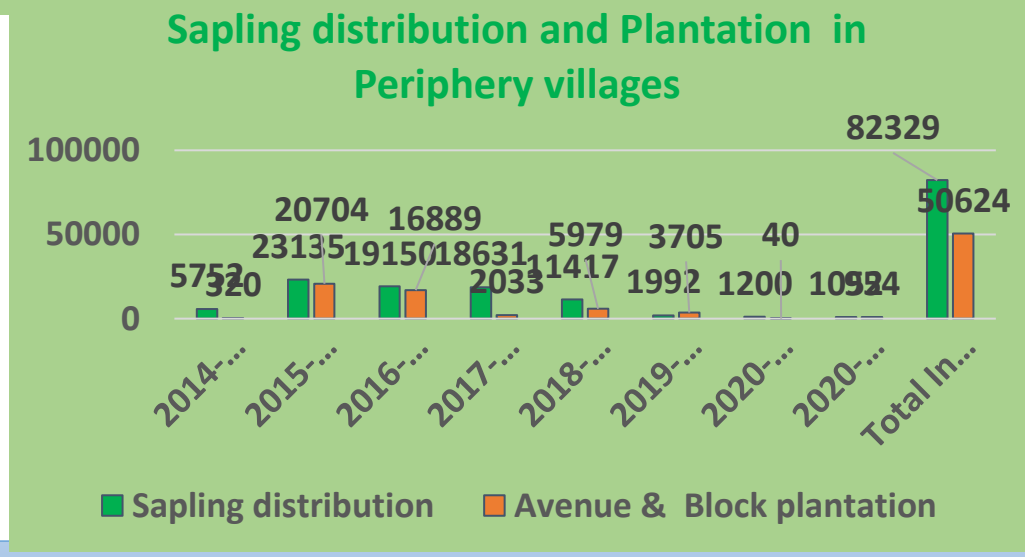
GHG INVENTORIZATION – Green Belt Development





Systematic green belt development initiatives:-

- **Total 139535 trees survived** till date inside plant and colony premise out of which 167930 sapling planted the survival rate is around 83%
- 33% of total accrued area i.e. over 115 acres is developed as green belt
- 150 type of different species is planted through out the plant and colony Premises.
- Quick growing forest tree plantation initiatives along boundary line havin wood value & dust prevent potential
- Landscaping /garden development over 16.5 acres of area for beautification and aesthetic purposes



GREENBELT DEVLOPEMENT INITIATIVES

Inaguration of Waste Converter machine by Unit Head Sri Manoranjan Sahoo

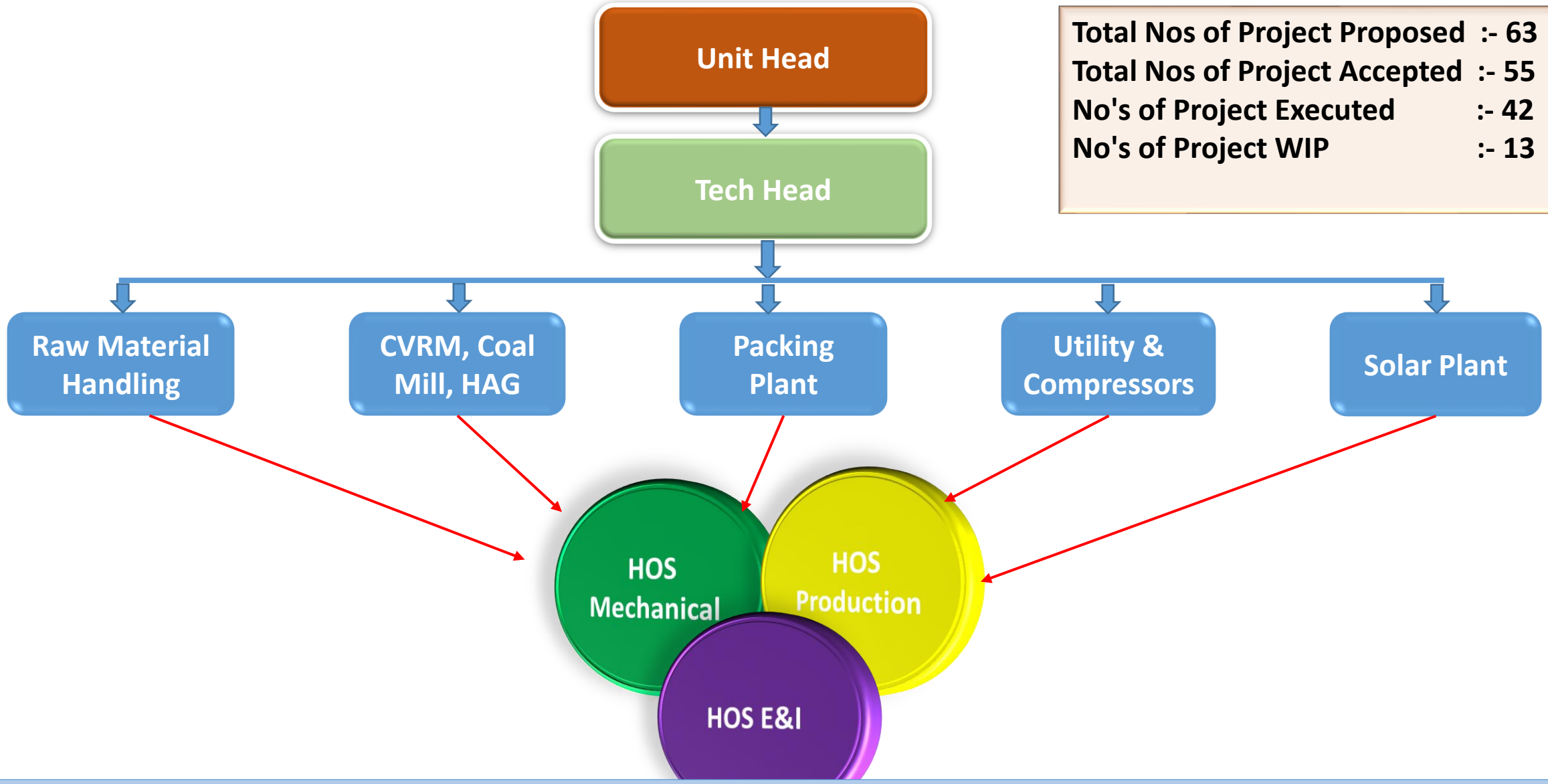
- ✓ *The Organic Waste Converter (Model RN 200) is the machine "only of its Kind" and is an unique Initiatives from Kapilas Cement towards better Environment in our surroundings. Beside this it reduces the cost of disposal of waste, helps in creating Zero garbage in township, reduce water pollution and 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

- Rewards
- Achieving Goals
- Action Plan & Implementation
- Analyzing & Brain Storming to evolve Energy improvement projects
- Energy Conservation Monthly Review Meeting
- Daily Consumption Monitoring
- Core Committee Team

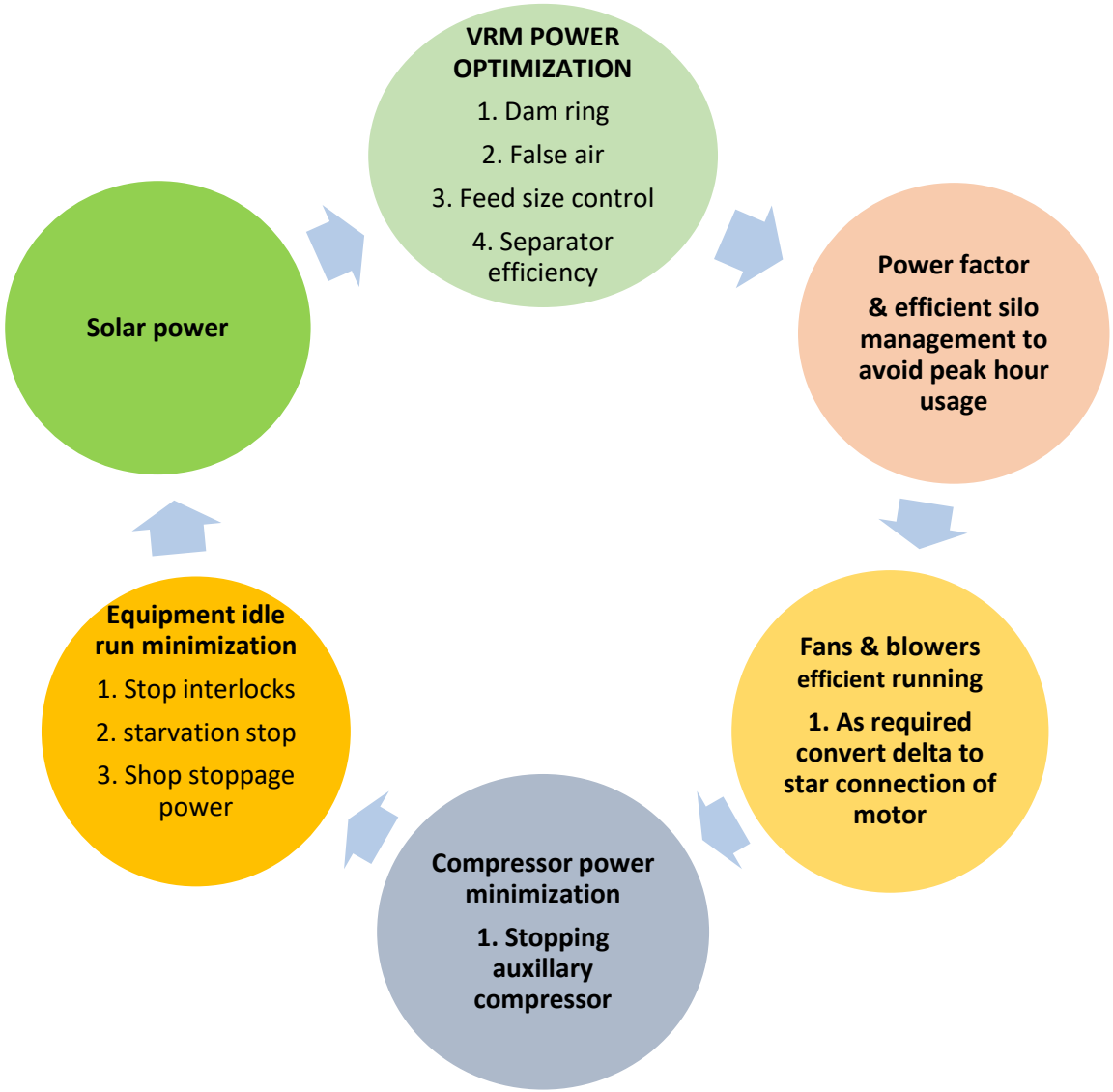
Core Committee Team-Energy Cell

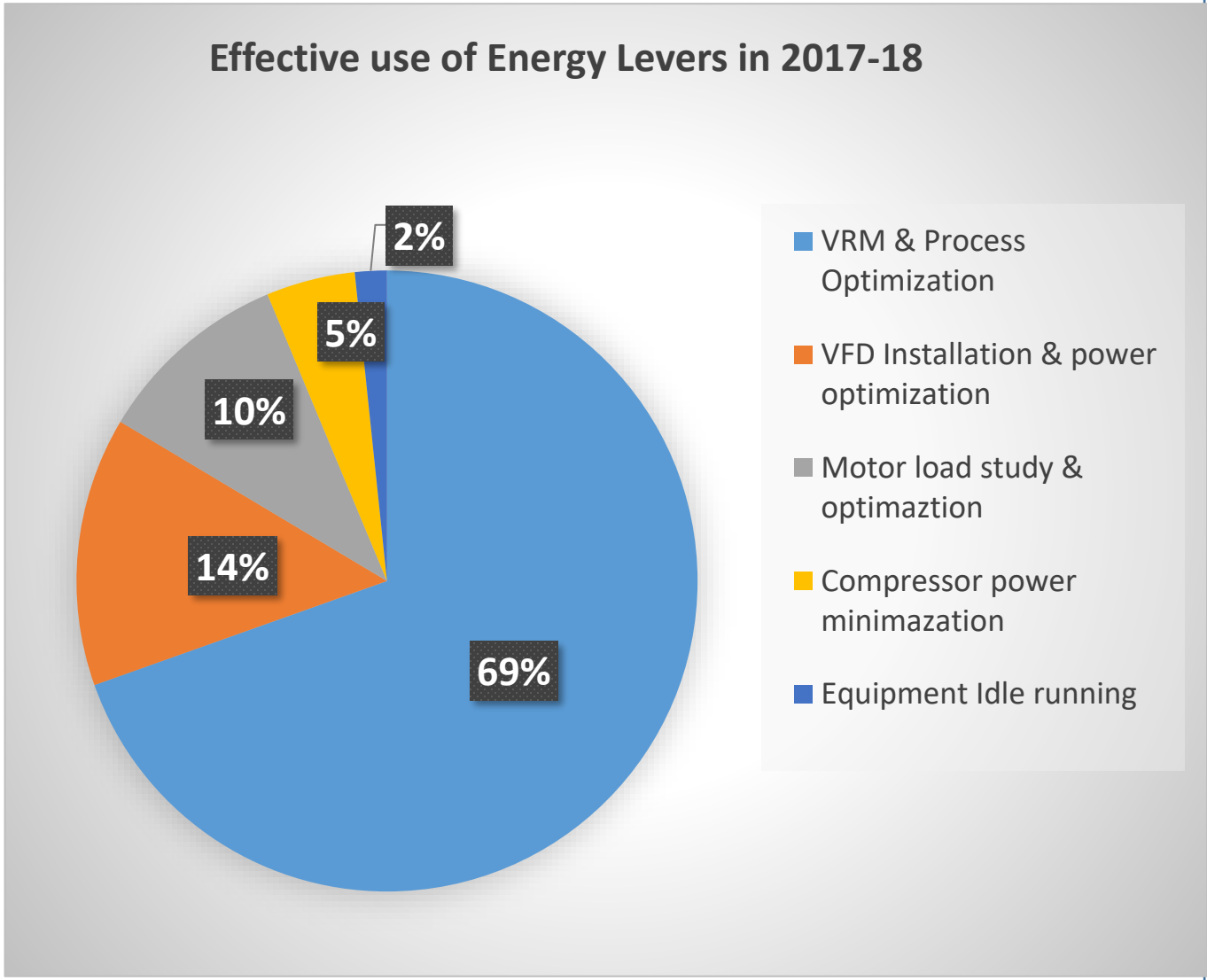
Dalmia Bharat Group



Total Nos of Project Proposed :- 63
Total Nos of Project Accepted :- 55
No's of Project Executed :- 42
No's of Project WIP :- 13

Methodology: Energy Levers





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.)

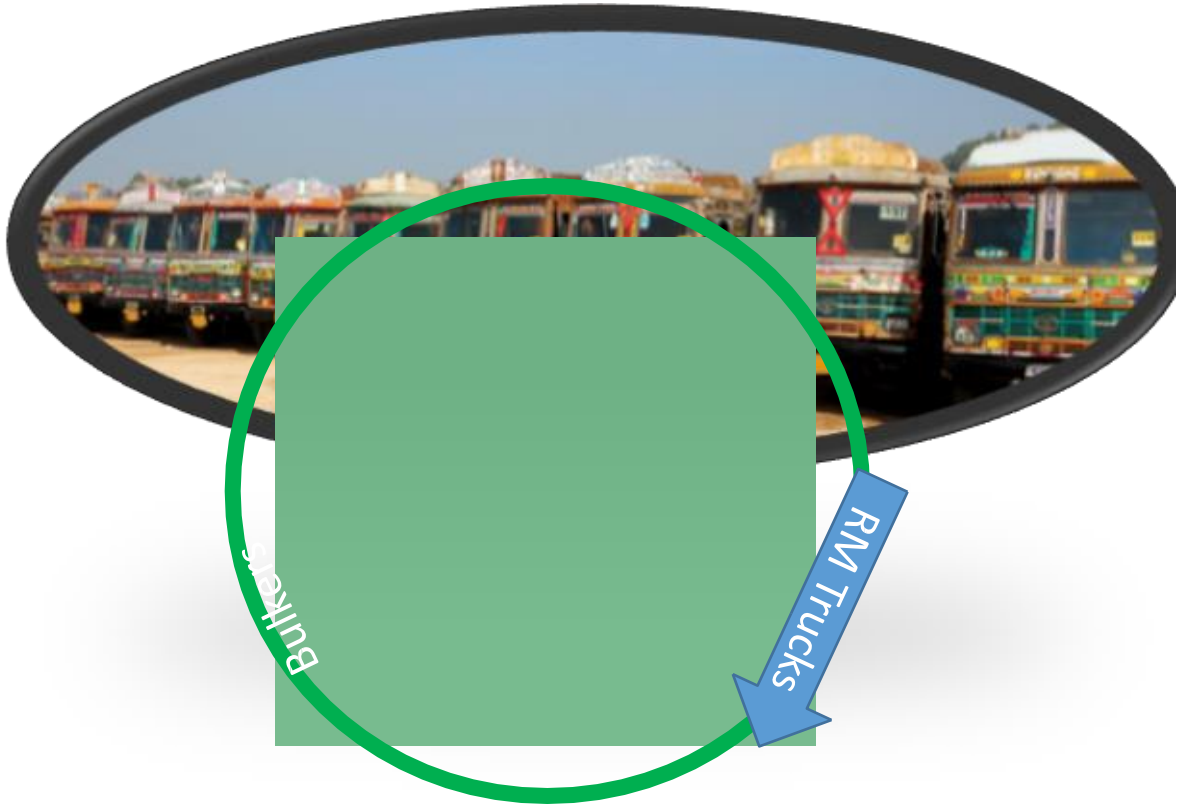
OFFICE ORDER

Dt. / - 28th March 2017

In view of implementation of the Energy Management System (EnMS) / ISO 50001:2011 in our organization, it has been decided to have following considerations in the Procurement and Services:-

- Energy consumption norms shall be one of the important criteria while finalizing procurement of any item. Total cost of the product should account the product cost with energy consumption cost within its expected life.
- Wherever applicable, star rating should be obtained from the vendors. Product cost analysis should be done for 3/4/5 star rating products of different makes. Cost comparison should be done for equal star rating.
- While requesting quotations / offers from various suppliers, energy efficiency criteria must be mentioned on the "quotation request form".
- For jobs execution / providing services, energy consumption data should also be obtained from the contractors / vendors on per day basis and / or within the given contract period. Also the energy consumed shall be mentioned on Daily and Monthly basis.
- Idle running of equipment, wastage of water, air, fuel etc. will impact performance rating of the contractor. The unit may impose penalty on observing any such incidences.

UNIT HEAD



Implementation of ISO 50001:2011

TÜV NORD

CERTIFICATE

for the Energy Management System as per
EN ISO 50001 : 2011

KAPILAS CEMENT MANUFACTURING WORKS
(A UNIT OF OCL INDIA LIMITED)
Biswali, P.O. Barunia, P.S. Tangi, Dist : Cuttack,
Odisha - 754 082,
India

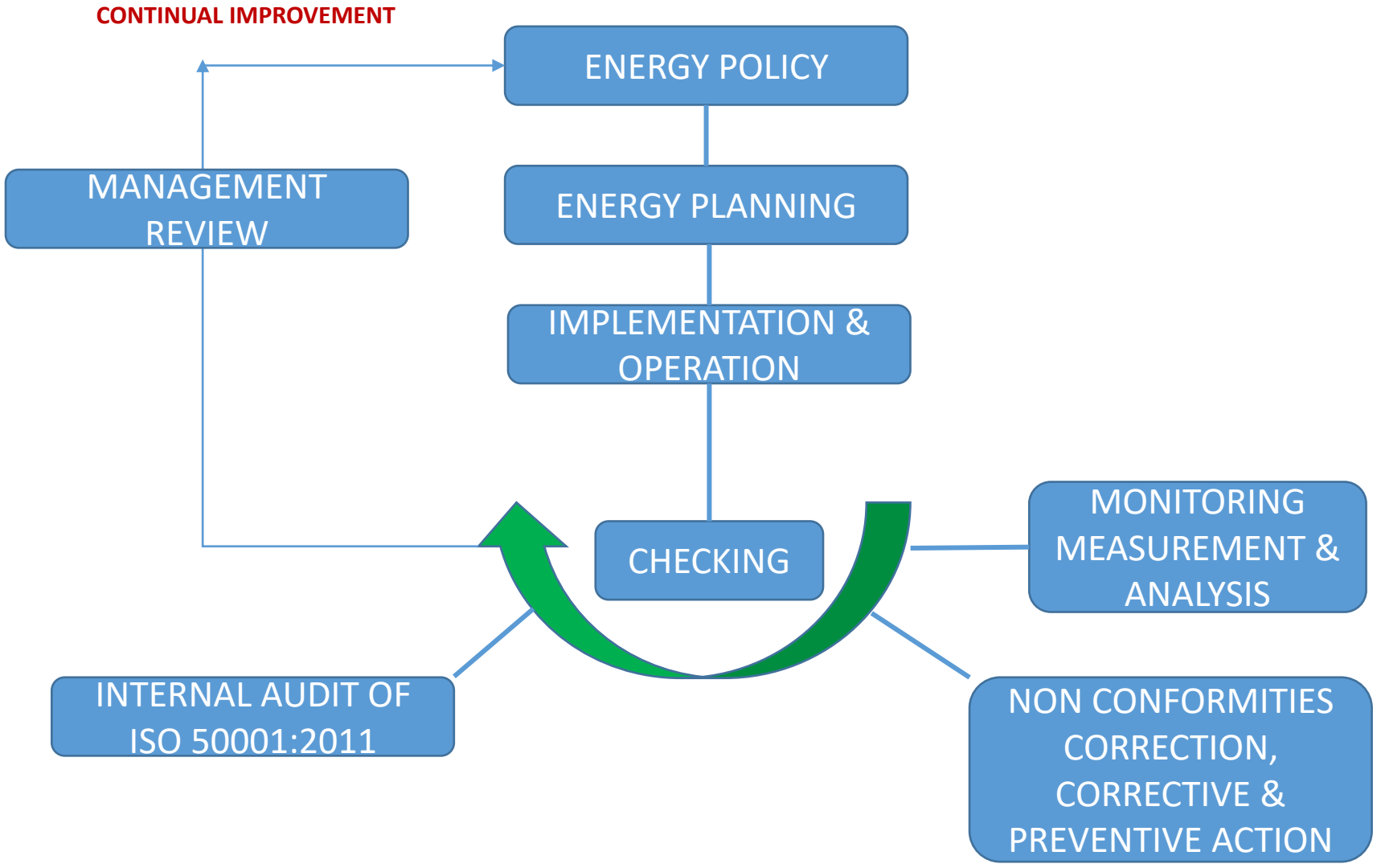
Manufacture and Supply of Portland Slag Cement & Portland Pozzolana Cement by Grinding and Solar PV Power Generation for Captive Use

TÜV NORD CERT GmbH

DAkkS

ISO 50001: 2011

Steps followed for Implementation of ISO 50001:2011



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

CII – IGBC Green Building Platinum Award

Awarded IGBC Green Building
Platinum Award with rating of 87 points

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***

Awards & Accolades

Awarded First Prize in Cement Sector in India in
National Energy Conservation Award,BEE, Govt of India

AWARDS & ACCOLADES

Awarded Energy Efficient Unit Award by CII National Energy Management Summit, 2017 held at Hyderabad

Awarded Excellent Energy Efficient Unit Award by CII National Energy Management Summit, 2018 held at Hyderabad

Awarded Excellent Energy Efficient Unit Award by CII National Energy Management Summit, 2019 held at Hyderabad

Awards & Accolades

CII Performance Excellence Awards 2019 for Solar Power Plant


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