

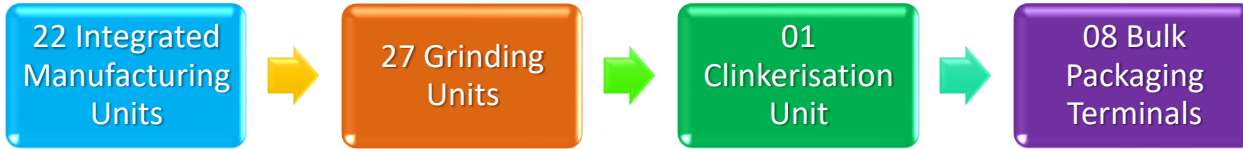
Unit: Vikram Cement Works



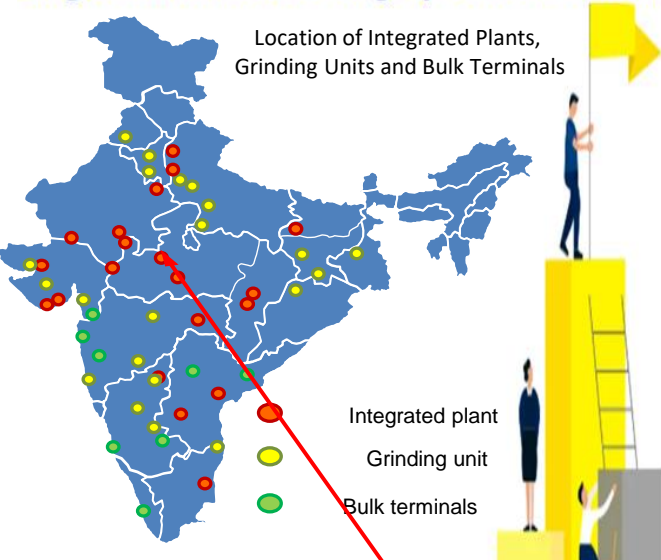
Team Members/ Presenter's

Name	Chandan Srivastava	Rakesh Sharma
Designation	Manager- TS	Sr. Manager
Mail ID	Srivastava.chandan@adityabirla.com	sharma.rakesh@adityabirla.com

Company- UltraTech Cement Ltd



3rd Largest producer cement in the world (Excluding-China)
Largest manufacturer of grey cement in India



Consolidated Capacity 119.95 Million Tonnes Per Annum (MTPA) of Grey Cement



VISION

TO BE THE LEADER IN BUILDING SOLUTIONS

MISSION

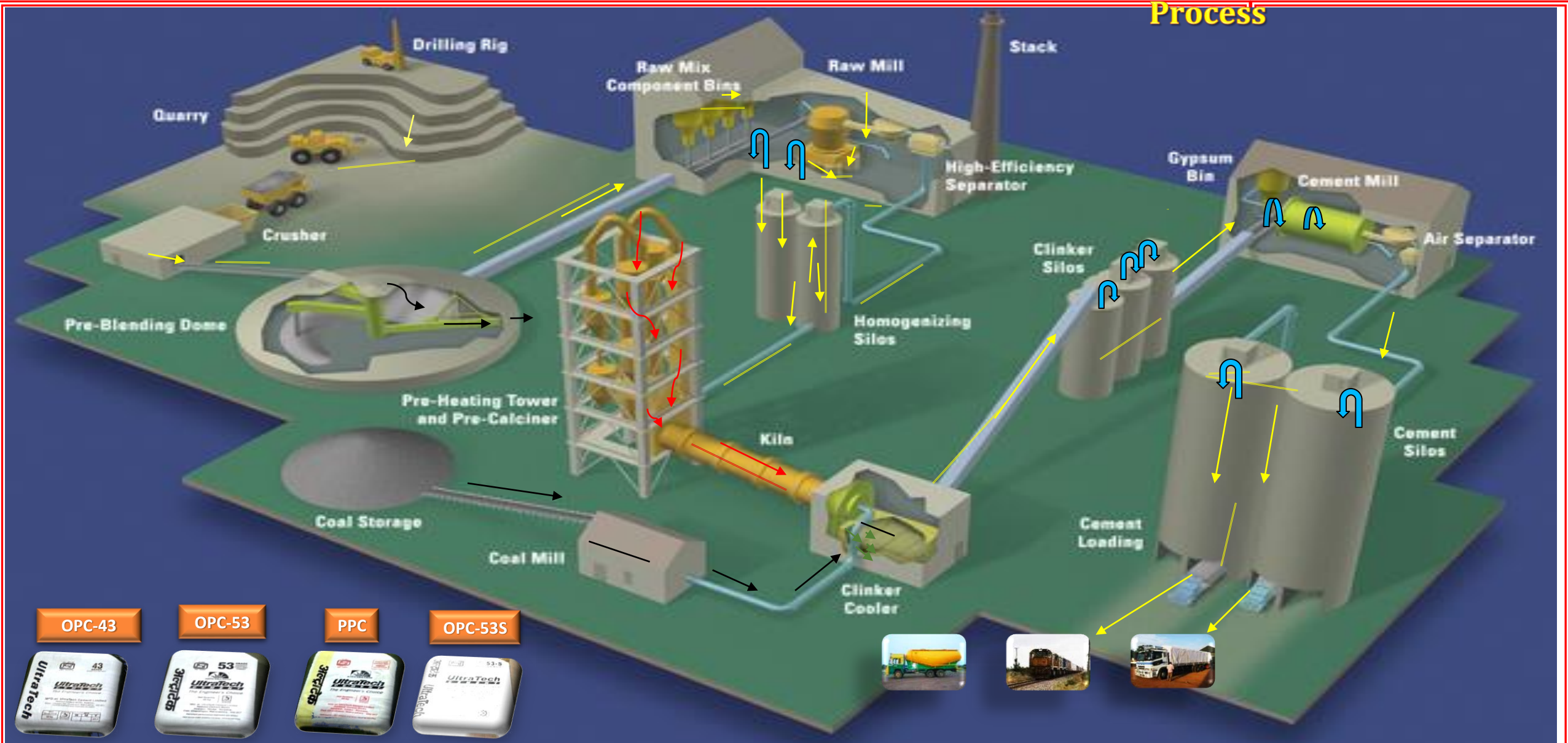
To deliver superior value to stakeholders on the four pillars of SUSTAINABILITY, CUSTOMER CENTRICITY, INNOVATION AND TEAM EMPOWERMENT

UltraTech Cement Ltd – Vikram Cement Works

UTCL : A part of ABG which is the best employer in India and Asia Pacific region.

- Vikram Cement Works : 4.0 MTPA cement production (along with 3 production Lines)
- Unit has **46 MW** Captive Thermal Power Plant (2X23MW).
- Installed Capacity **8.9MWp** Solar Power Plant
- Installed **482KWp** Roof Top Solar Plates
- First Cement Plant in India acknowledged as pioneer of TPM, JIPM Japan in 1995
- First Cement plant in India to obtain ISO 14001 in 1997, EMS Certification from DNV
- Certified with ISO 9001, 14001, ISO45001, ISO 50000,ISO 27001, SA8000 standards
- Certified with ISO50001 & Implemented Energy Policy in 2013
- Adopted WCM Excellence Model & Achieved Two times Gold award
- In year 2019 Sept, unit awarded with CII National Excellent Energy Efficiency Award & stood 1st.

Cement Manufacturing Process



Major Sections - Specifications

Line-1 Section	Equipment Type	Make	Installed Capacity	Operating Capacity
Kiln& Preheater	6 stage, single string with ILC	KHD Humboldt	1500 TPD	2850 TPD
Raw Mill	VRM	Loesche	135 TPH	200 TPH
Cement Mill	Ball	KHD	140 TPH	150 TPH

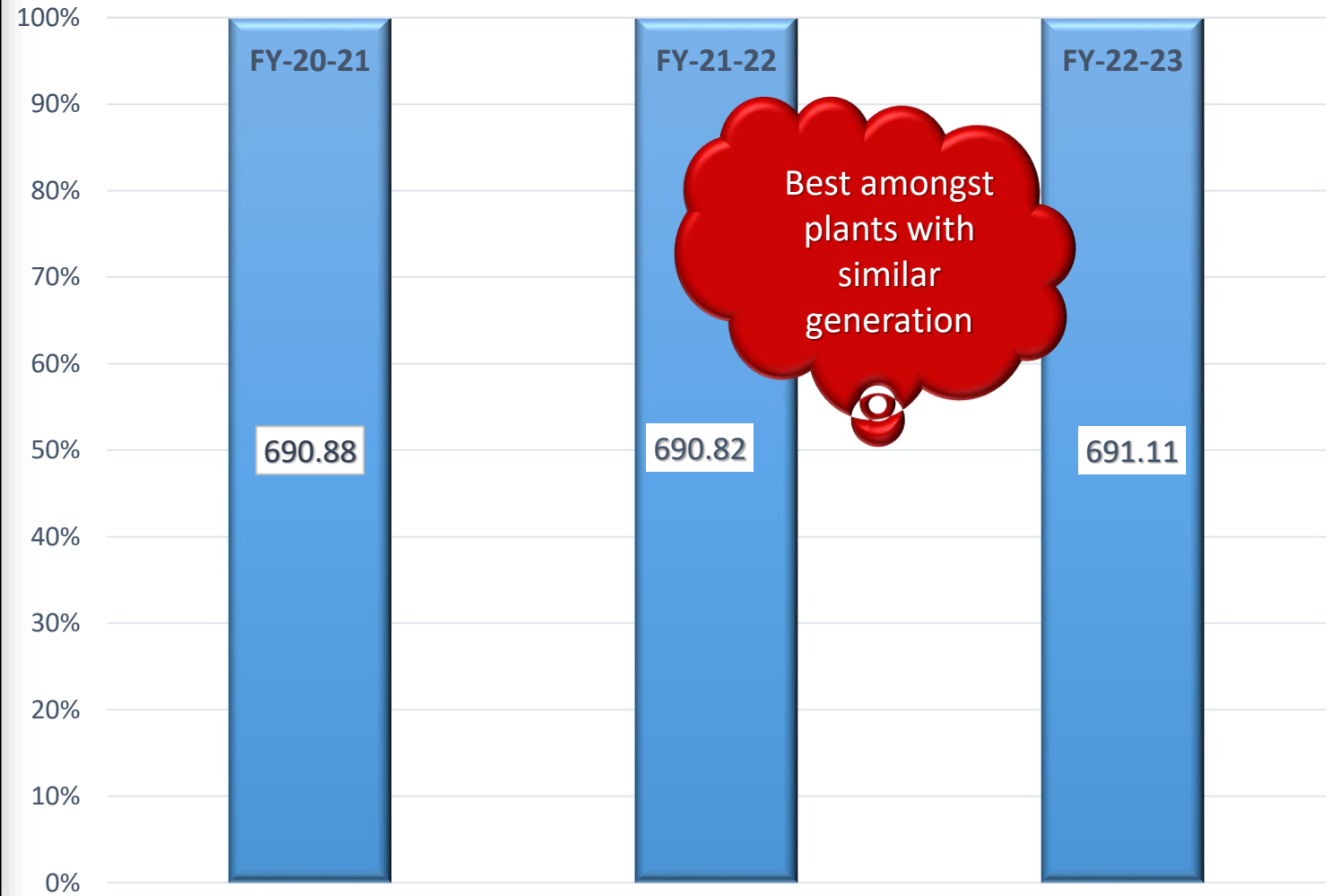
Line-2 Section	Equipment Type	Make	Installed Capacity	Operating Capacity
Kiln& Preheater	6 stage, single string with ILC	KHD Humboldt	1500 TPD	2850 TPD
Raw Mill	VRM	Loesche	135 TPH	200 TPH
Cement Mill	Ball	KHD	140 TPH	150 TPH

Line-3 Section	Equipment Type	Make	Installed Capacity	Operating Capacity
Crusher	Single	Beumer	1800 TPH	1700 TPH
Kiln& Preheater	6 stage, double string with ILC	Krupp Polysius	3000 TPD	4400 TPD
Raw Mill	Ball	Krupp Polysius	250 TPH	285 TPH
Cement Mill	Ball	Krupp Polysius	165 TPH	175 TPH

Sp. Thermal Energy Consumption (FY 21 to FY 23)

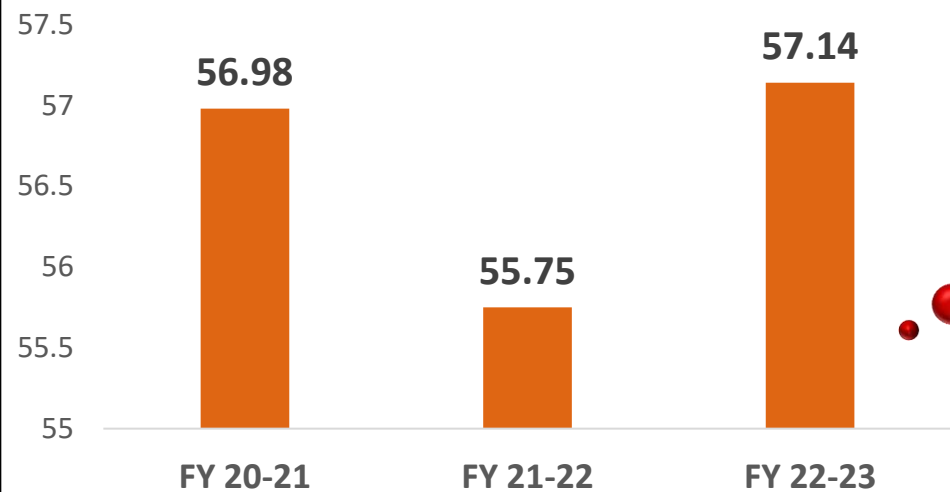


Specific Thermal Energy Consumption (kcal/kg of clinker)



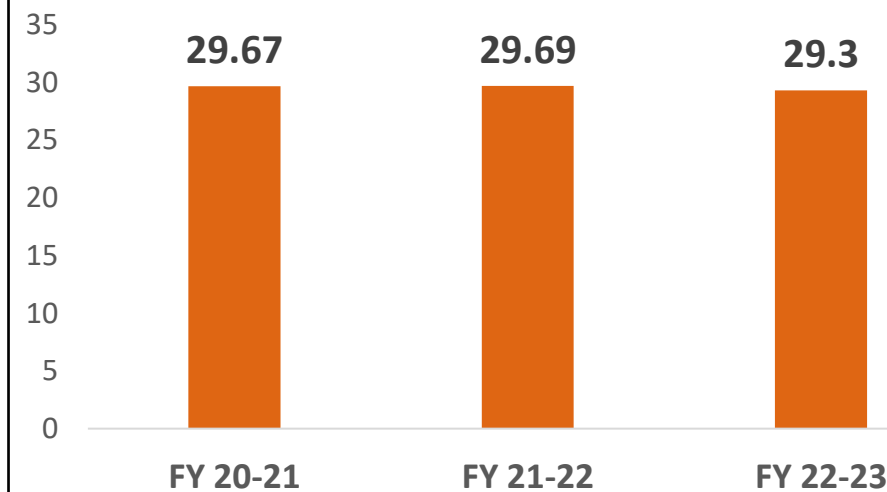
Sp. Electrical Energy Consumption (FY 21 to FY 23)

Up to Clinker (Kwh / MT clinker)

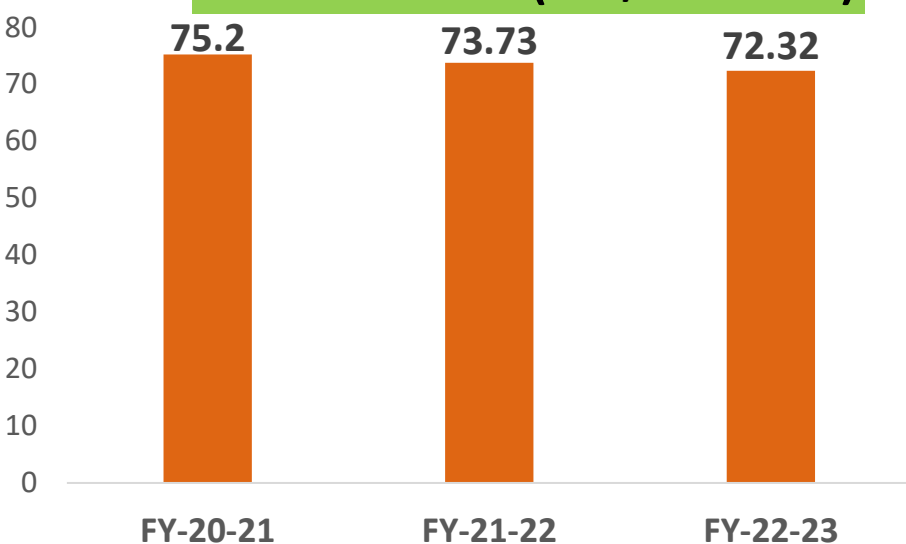


In FY-23 upto clinker power on higher side due to w.r.t FY-22

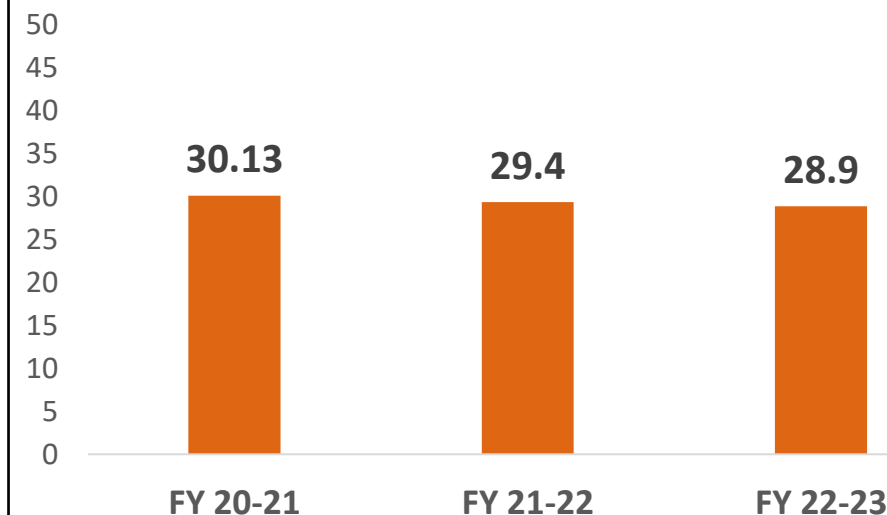
OPC – (Kwh/MT Cement)



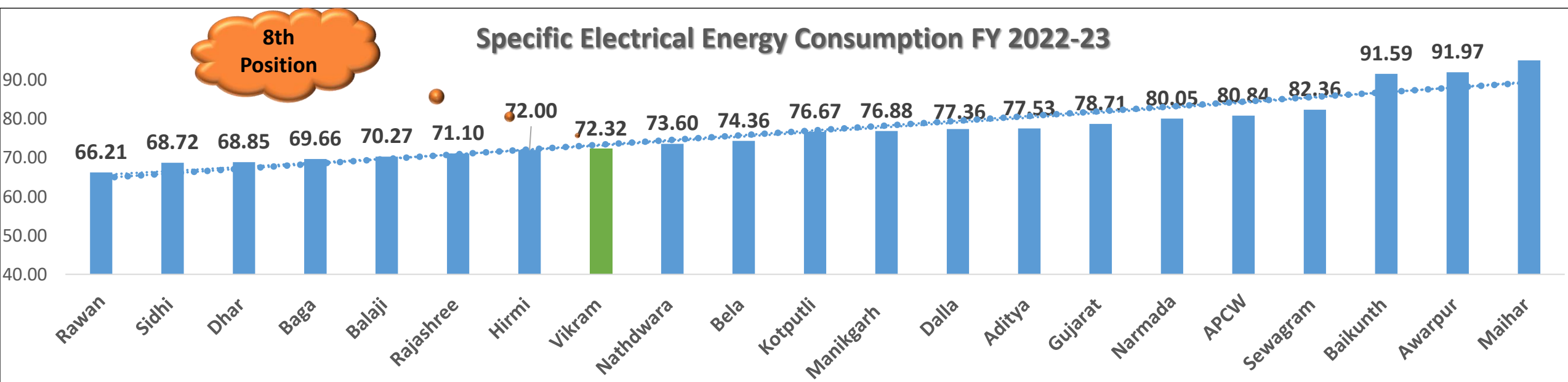
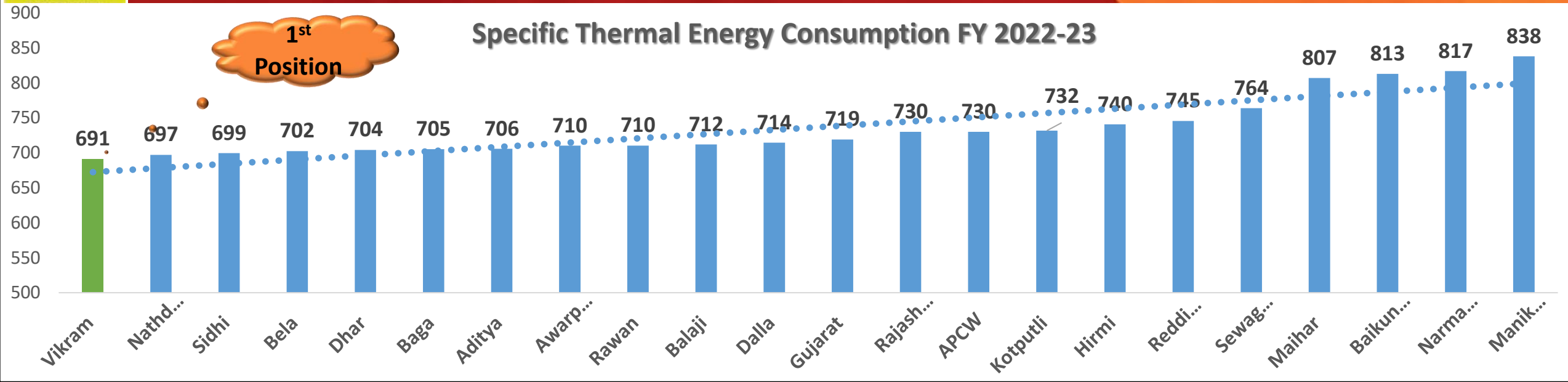
Overall Cement (Kwh/Mt Cement)



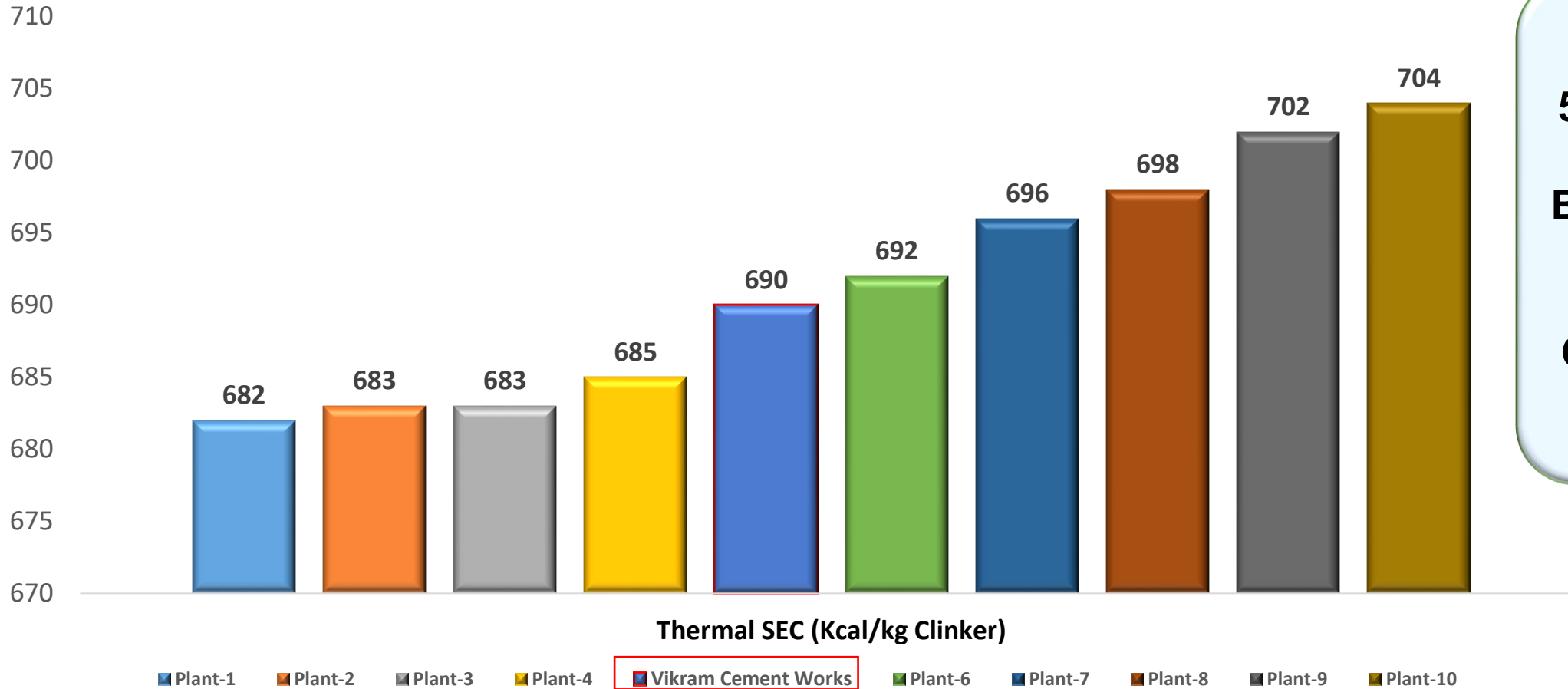
PPC – (Kwh/MT Cement)



Parameters		YTD Figure			
		2021-22	2022-23	Variance	Reason for Variance
Sp. Thermal Energy Consumption	(kcal/kg of clinker)	690.82	691.11	-0.29	
Sp. Electrical Energy Consumption	Up to Clinker (Kwh / MT clinker)	55.75	57.14	-1.39	
	Overall Cement (Kwh/Mt Cement)	73.73	72.32	1.41	Improved 1.91%
	OPC (Kwh/MT Cement)	29.69	29.30	0.79	Improved 2.66%
	PPC (Kwh/MT Cement)	29.40	28.9	0.50	Improved 1.7%



Thermal Energy Performance

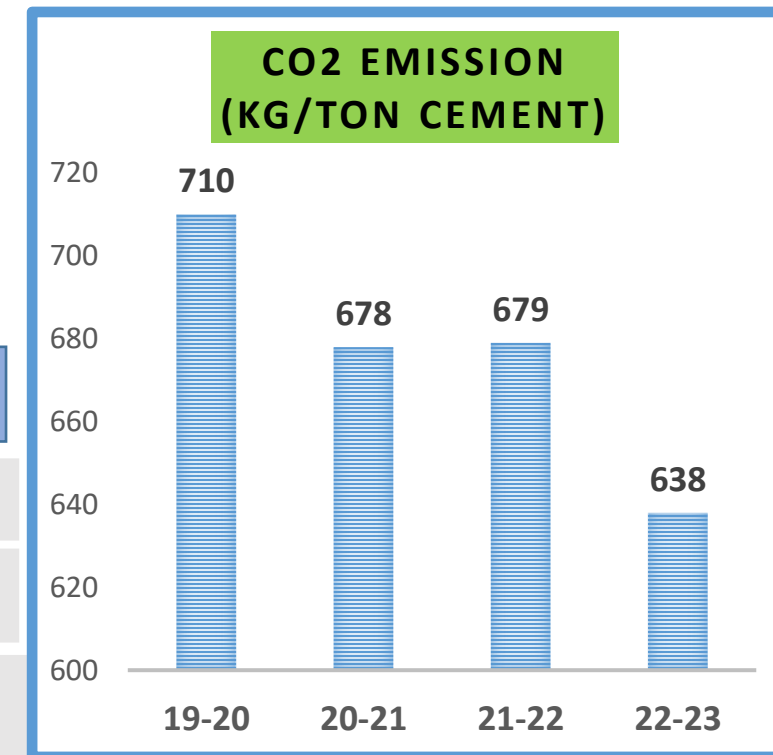
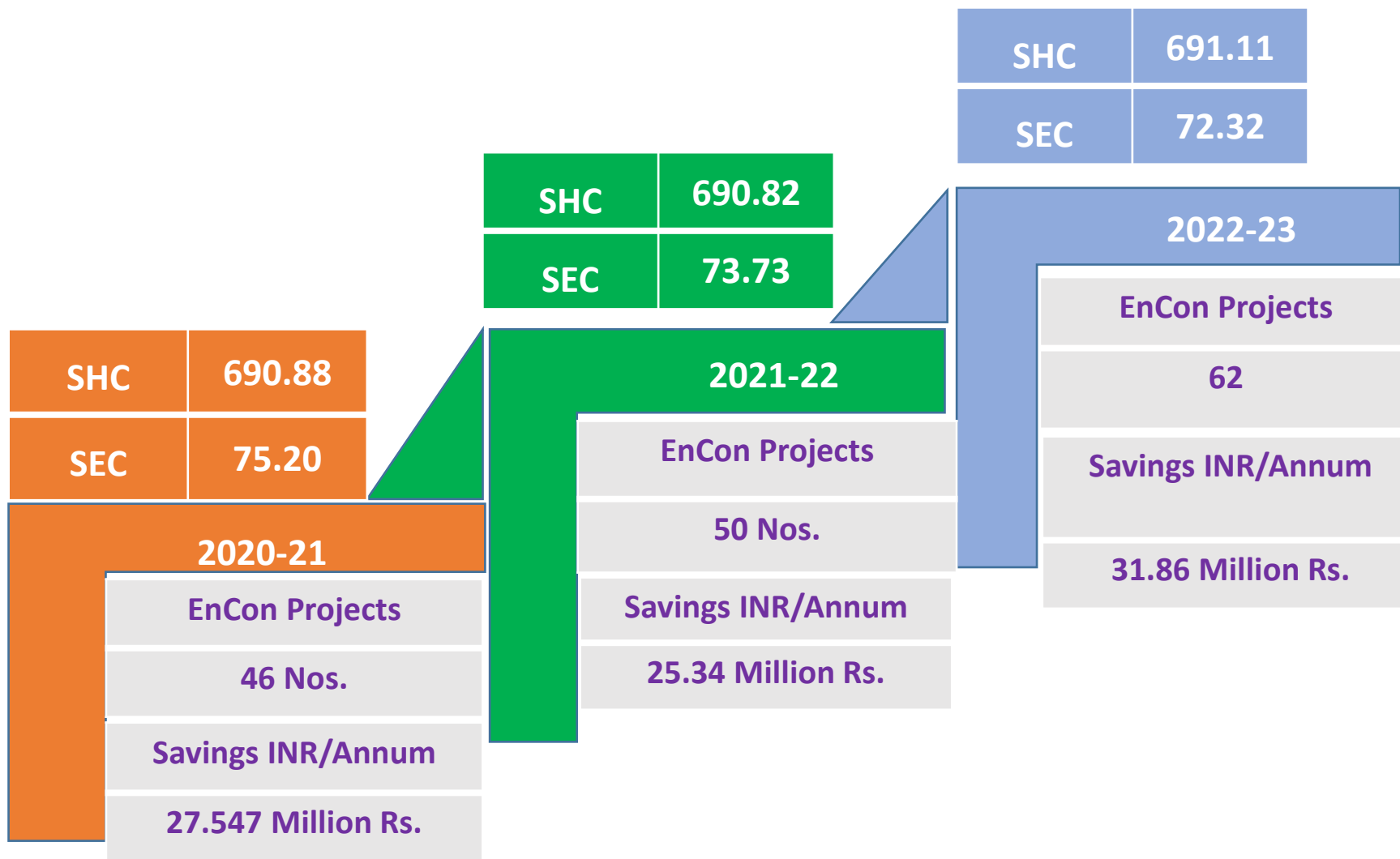


VCW
standards in
5th position @
National
Benchmarking
in Kiln Sp.
Heat
Consumption
** CII Energy
Benchmarking V5-
2022

Lowest in UTCL- 691 kcal/kg clinker

Road Map-EnCon Journey & Business Savings

“INNOVATION = IDEA + LEADER + TEAM + PLAN”



SUMMARY (FY2021-23)

EnCon projects	Nos.
Savings	Million Rs.

Major EnCon projects planned in FY 2023-24

Sl. No.	Project Description	Annual Electrical Saving	Annual Thermal Saving	Investment
		(Million Kwh)	(Million Kcal)	(Rs. In Million)
1	13 MW WHRS plant installation	1000	0	60
2.	Line-1 &2 Cooler upgradation for capacity enhancement and thermal efficiency improvement.	0	60000	Under Study
3.	Installation of floating solar power plant of 10 MWp	1000	0	60
4.	Installation of new solar power plant of 1.5MWp	4.32	0	21.5
5.	Raw Mill recirculation system	0.63	0	Under Study
6	Optimization of AFR & Raw mill mix feeding- by installation of online moisture & Flow jamming analyzer	AFR Increased by 10%	Resulting in annual saving of 5 Cr.	18

EnCon projects – Last Three Years

Year	No of Energy saving projects	Investments (INR Million)	Electrical savings (Million kWh)	Thermal savings (Million Kcal/ MTOE)	Savings (INR Million)
FY -2020-21	46	60.5311	1.02		27.547
FY -2021-22	50	25.19	3.842		25.34
FY -2022-23	62	74.4	4.402		31.868

Theme

Maximization of TSR through Digitalization initiatives with inhouse modifications

Problem

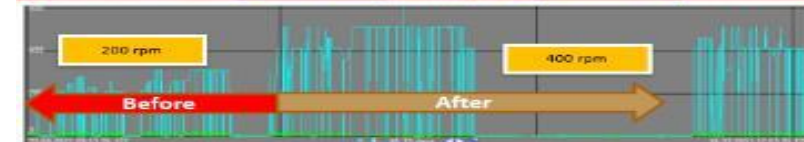
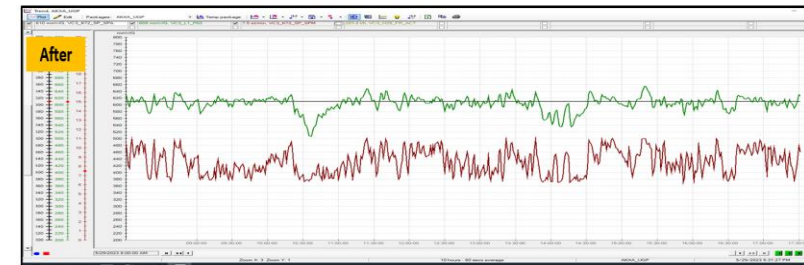
- Frequent tripping of AFR feeding circuit due to CO in calciner and chute jamming because of bunching.
- Uneven feeding of MSW screw and jamming of MSW screw chute.
- Variation in PC temperature during AFR feed cut and feed variation.

Solution

- Kiln coal optimization to reduce PC CO and PC coal logic modified
- MSW screw conveyor chute modification to avoid bunching and jamming of MSW screw discharge
- MSW push feeder operation sequence modified to achieve consistent feeding of MSW.
- Feed forwards logic (AKXA tech) provided to control PC coal w.r.t AFR feeding

Benefit

- ✓ TSR achieved >20 % on consistent basis and achieved ever highest YTD TSR in Kiln-3.
- ✓ Consistency achieved in PC outlet temperature.
- ✓ Jamming frequency of MSW screw discharge chute and belt chute decreased.
- ✓ Specific power has been reduced by 0.5KWh/t and AFR TSR percentage has been increased by 2%.



Theme

To optimize the raw mills, power to reduce overall clinkerization power.

Problem

- VRM without recirculation in line-1 and 2 needs to keep higher dam ring height leads to higher mill power.
- Lower grinding media charge in mill-3 leads to mill chocking and lower out put.
- High false air ingress in VC1 and 2 due to unavailability of closed recirculation system.

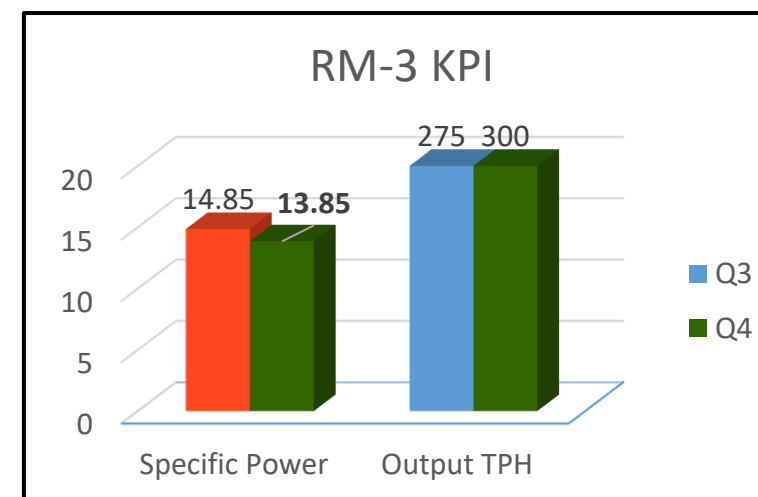
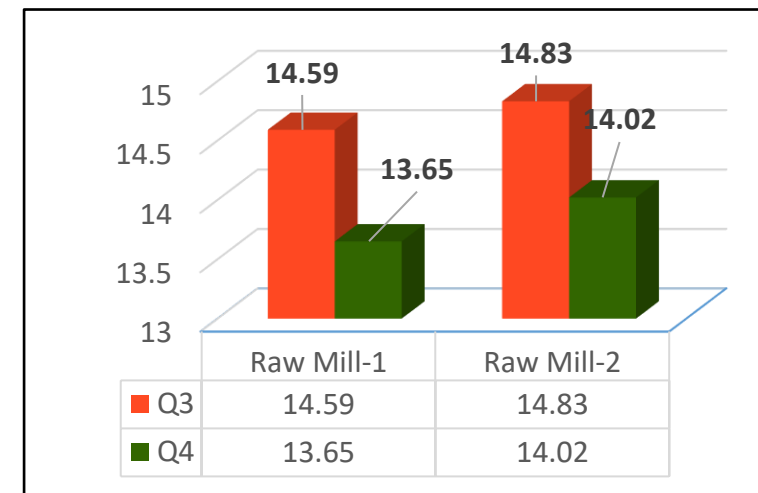
Solution

- ❑ Dam ring height reduced from 75 to 60 mm
- ❑ False air reduction from 21 to 19 %
- ❑ Mill filling level increased by utilizing used segregated media from cement mill(14 MT Charged).
- ❑ Grinding Pressure increased from 110 to 125 bar with new roller
- ❑ Modification of polycom venting duct

Benefit

- ✓ Reduction of 1200 kwh in main drive and (0.25 kwh/Mt) material in Raw Mill-1 & 2
- ✓ Reduction in 0.1 kwh/Mt material in Raw Mill-1 & 2
- ✓ Power Saving from 14.4 to 13.7 Kwh/MT
- ✓ Increase in Mill output 275 to 300 TPH

• Achieved overall Power Gain RM-1&2



Theme

Utilization of AFR in TPP to reduce power cost.

Problem

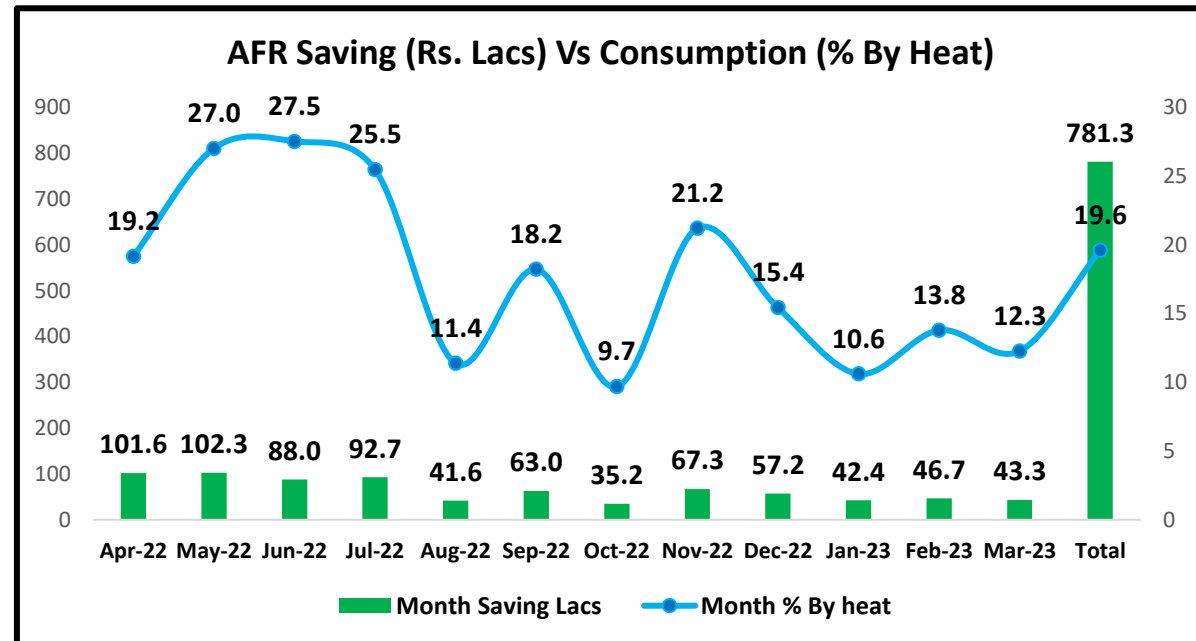
➤ TPP cost rapidly increased due to hike in convection fossil fuel prices & other market conditions. Further availability of required fuel was major challenge.

Solution

❖ To mitigate the rising cost pressure, usage of AFR including agro waste, briquettes & carbon black powder started in mix with the convection fuel. Initially started with 5 % & took up to 25 % by heat.

Benefit

- ✓ Optimized the fuel/Power cost by -0.64 Rs./Kwh
- ✓ Total Saving by utilization AFR -Rs. 738 Lacs against coal consumption.



ACC-1 & ACC-2 Interconnection

Theme

Heat rate optimization through ACC 1& 2 Interconnection

Problem

Due high fuel cost and high generation cost only single TPP has to run as grid cost is lower than TPP generation cost due to this scenario

- ✓ High Heat rate due to Low load operation
- ✓ High Auxiliary Power consumption of ACC

Solution

Brain storming done with in the TPP functions to reduce heat rate and auxiliary and based on the best practices of other sister unit of north cluster it was decided to implement interconnection between ACC1 & 2

1. Drawing finalised and Civil department start foundations casting work.
2. Vendor start fabrication of columns and duct
3. Started erection with 100 ton Crane and hydra on war footing basis to complete project with in time frame.
4. Logic modification done for Both ACC operation with single turbine

Benefit

- ✓ **Heat Rate Improved by 21 Kcal/Kwh**
- ✓ **Acc Sp. power (Kwh/MW) reduced by 1.16**
- ✓ **Monetary Saving through reduction in PHR Rs. 7.49 Lac**
- ✓ **Monetary saving through power saving Rs. 1.07 Lac**
- ✓ **Total Saving Rs.8.56 Lac**



Utilisation of Renewable Energy sources

Year	Technology(Electrical)	Type of Energy	Onsite/Offsite	Installed Capacity (MW)	Generation (million kWh)	% of overall electrical energy
FY 2022-23	Power Generation	Solar	Onsite	8.9	14.22	5.17

S.No	Capacity Addition	Investment/Remarks
1	8.9 MW Solar plant	Agreement with M/s Amplus Dakshin power with UltraTech share of 26% equity equivalent to Rs. 30 Million
2	10 MW Hybrid (Solar+Wind)	UltraTech has a 25 year contract with M/s Aditya Birla Renewable Ltd. Our unit VCW has a share of 10 MW equivalent to Rs. 83.8 Million.
3	Installation of new solar power plant of 1.5MWp	Rs. 21.5 Million



Waste utilized as fuel & alternative raw material

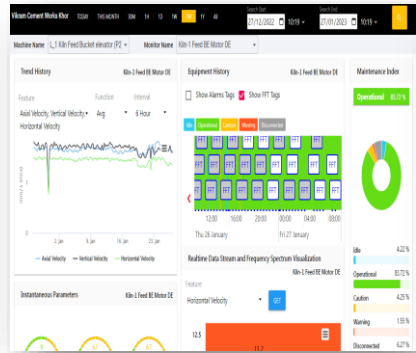
Year	Plastic Waste Cons. Quantity	Total AFR Quantity	Plastic Waste as percentage of Total AFR
FY -2020-21	1267.20	27890.64	4.54%
FY -2021-22	7535.23	33111.37	22.75%
FY -2022-23	13724.23	54447.81	25.20 %

Year	Waste as Raw Material	Quantity	Savings by Substitution (Rs. Lakhs)
FY -2020-21	a) Red Mud b) Aralumina	a) 575.97 MT b) 1183.204 MT	348.76
FY -2021-22	a) Red Mud b) Aralumina	a) 46710.85 MT b) 1533.43 MT	600.01
FY -2022-23	a) Red Mud b) Aralumina	a) 18452.016 b) 214.517	3.50

Red Mud in place of Laterite , Aralumina in place of Bauxite

Digitization

Equipment reliability & performance improvement



Canteen & Petrol Management system

Innovation

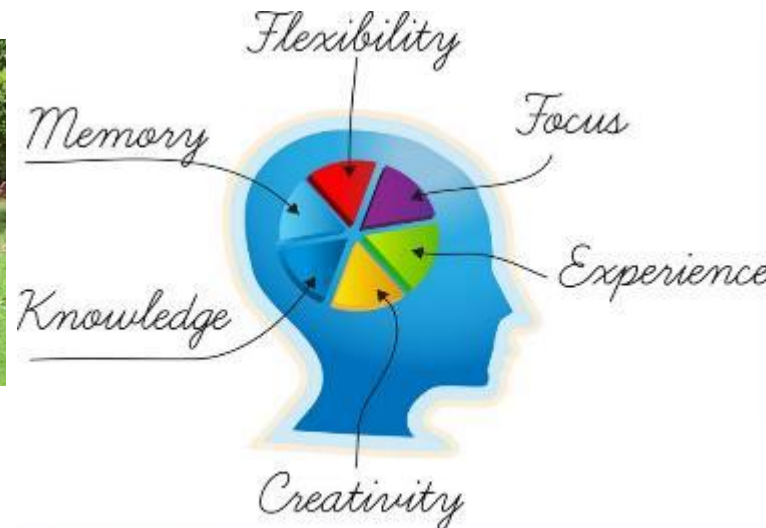
Equipment Safety

Belt tear Arrangement & Running Stone removal device



Water Harvesting and rare species plantation

Biodiversity



Sewage Treatment Plant
Waste Water Management

Theme

IoT based Vibration measurement & Analysis

➤ Realtime monitoring of Vibrations in critical drives

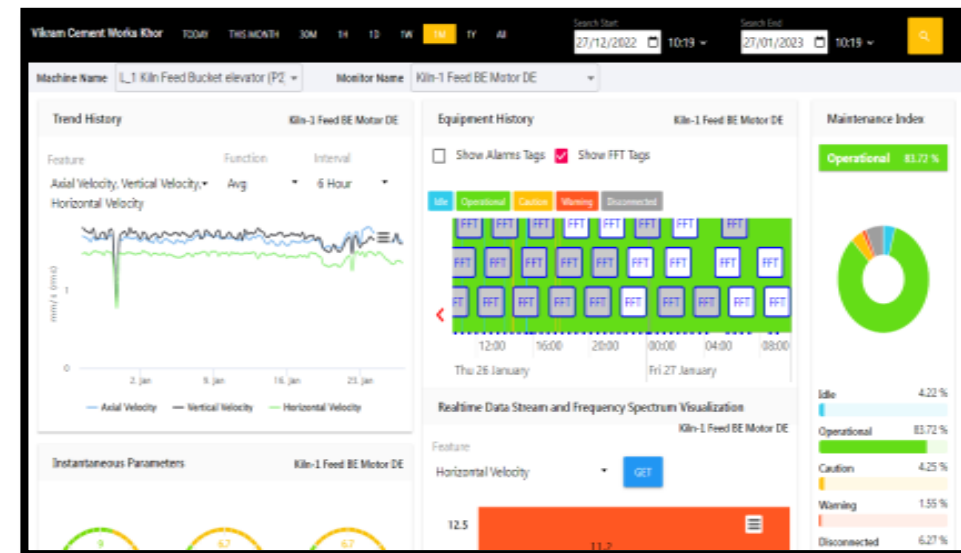
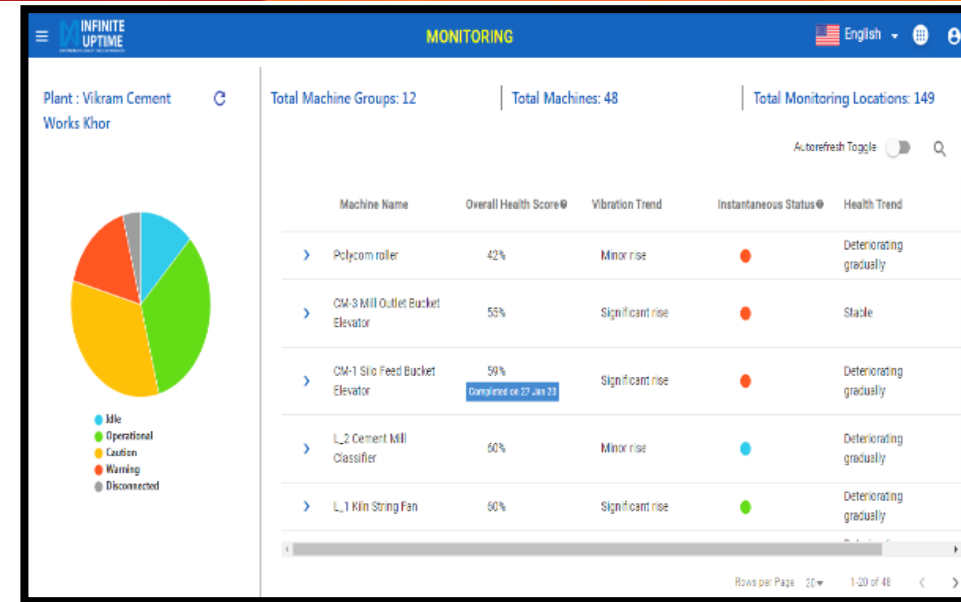
☐ Getting alert/ notification along with root cause analysis report for avoiding any breakdown/ failure

- ✓ 1. Line-2 PH fan: Avoided unplanned stoppage 4 hrs. Saved production loss ~ 650 MT2.
- ✓ 2. Line-3 Raw Mill: Avoided unplanned stoppage >6 hrs. Saved production loss ~ 635 MT
- ✓ 3. Line-2 Raw Mill: Avoided unplanned stoppage >24 hrs. Saved production loss ~ 2540 MT
- ✓ 4. Extra 7 vibration issues were identified & avoided equipment failure & production losses.
- ✓ Till date we avoided 7 no's of major equipment failure/ breakdown, which helps to save our production losses, which impact in saving of Rs. 73.50 lacs.

Problem

Solution

Benefit



Best Practices in the Plant (Non Energy Efficiency)

Theme

Solar Power optimization through digital data analytics of solar management

Problem

Solar Performance ratio not achieved at optimum level
Maximize level of the solar generation effected

Solution

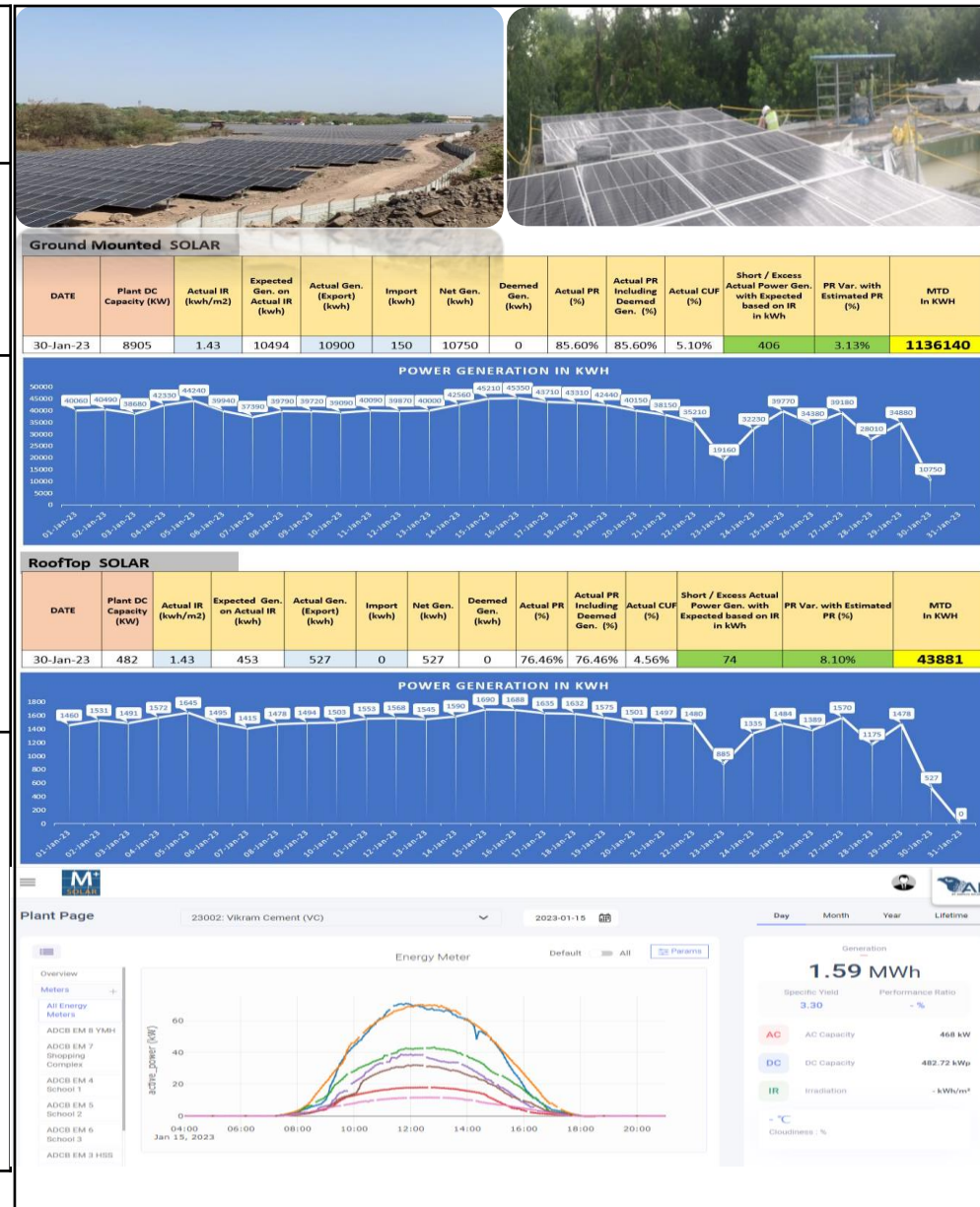
Implementation of digital data analytical tool for monitoring day today generation and performance ratio. Based on the analysis following action taken

1. Solar PV Cell/Table Chemical cleaning started and frequency of cleaning decided based on the performance
2. Tree trimming done based on the IR value zone wise

Benefit

✓ Solar performance ratio is improved by 1.96% from last four

Months	Expected Gen. on Actual IR (kwh)	Actual Gen. (Export) (kwh)	Performance Ratio (%)
Jan-23	1114878	1135640	1.86%
Dec-22	1098110	1121840	2.16%
Nov-22	1158781	1161310	0.22%
Oct-22	1105924	1145930	3.62%



Theme

AI-OT based Boiler Reliability digitalization project

Problem

Unplanned stoppage leads to

- 1) huge productivity loss
- 2) Maintenance cost became high
- 3) Variability in Plant KPI's performance due to frequent load variation

Solution

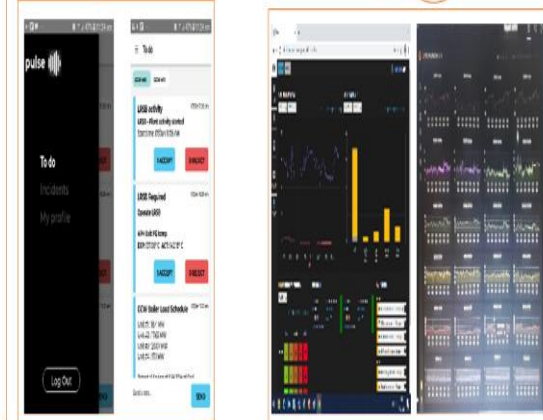
Implementation of Advanced analytics and artificial intelligence platform *Pulse*. In first phase it will be deployed in Boiler-1 based on its success it can be further implemented in Boiler-2

Using plant operation data and various algorithms based models overall reliability can be improved thus reduce forced outages and Lower cost of maintenance through predictive maintenance

Benefit

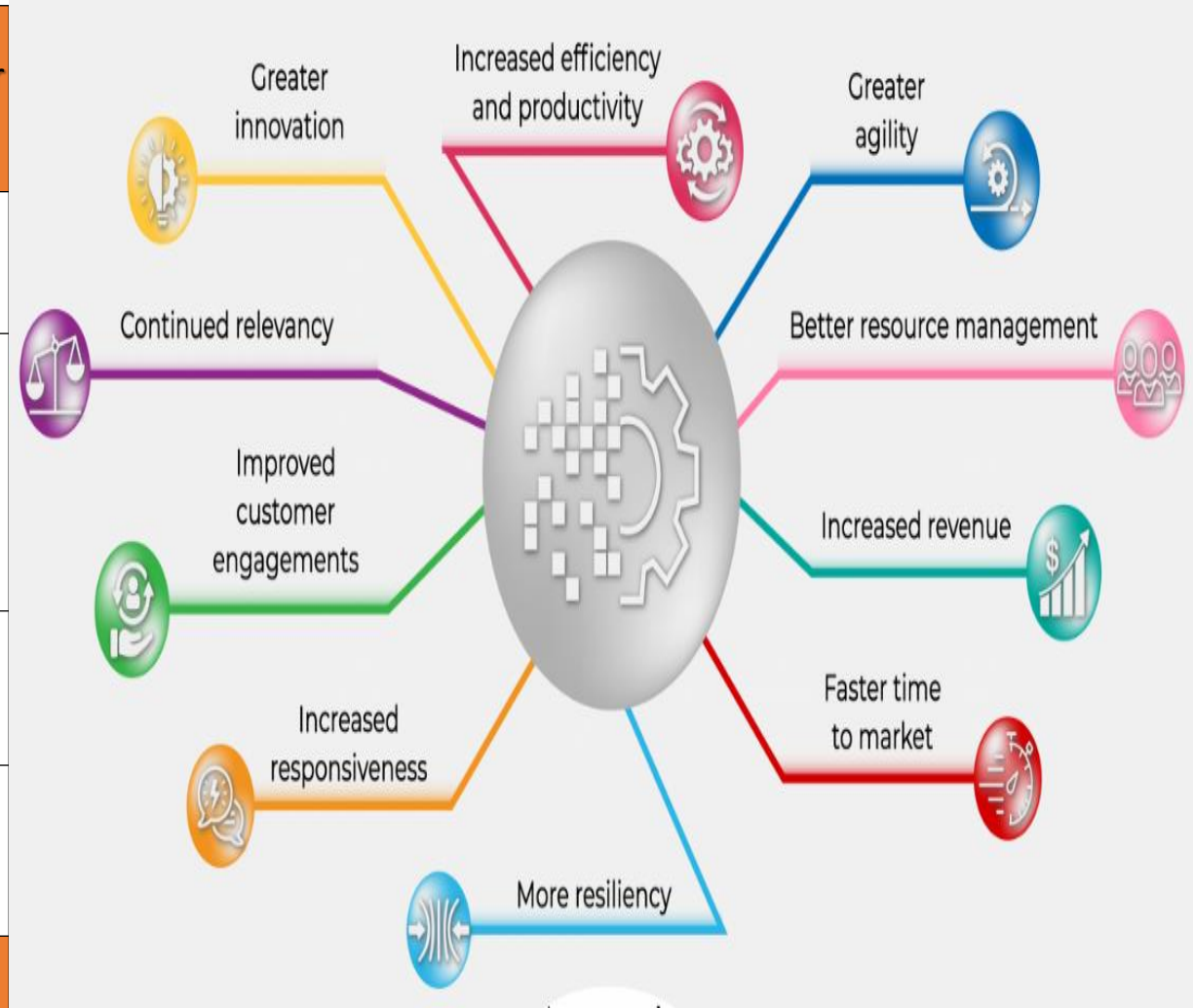
- ✓ Reduction in Unplanned Failures by 10%
- ✓ Maintenance costs reduced by 5%.
- ✓ Improvement in Overall Heat Rate by around 10 Kcal/kWh
- ✓ Improvement in decision making through system supported advisories and discipline to maintain operating parameters consistently (irrespective of individual operator's decisions)
- ✓ Help operating team to act proactively on change in pattern of critical parameters of equipment (through triggering of alarms)

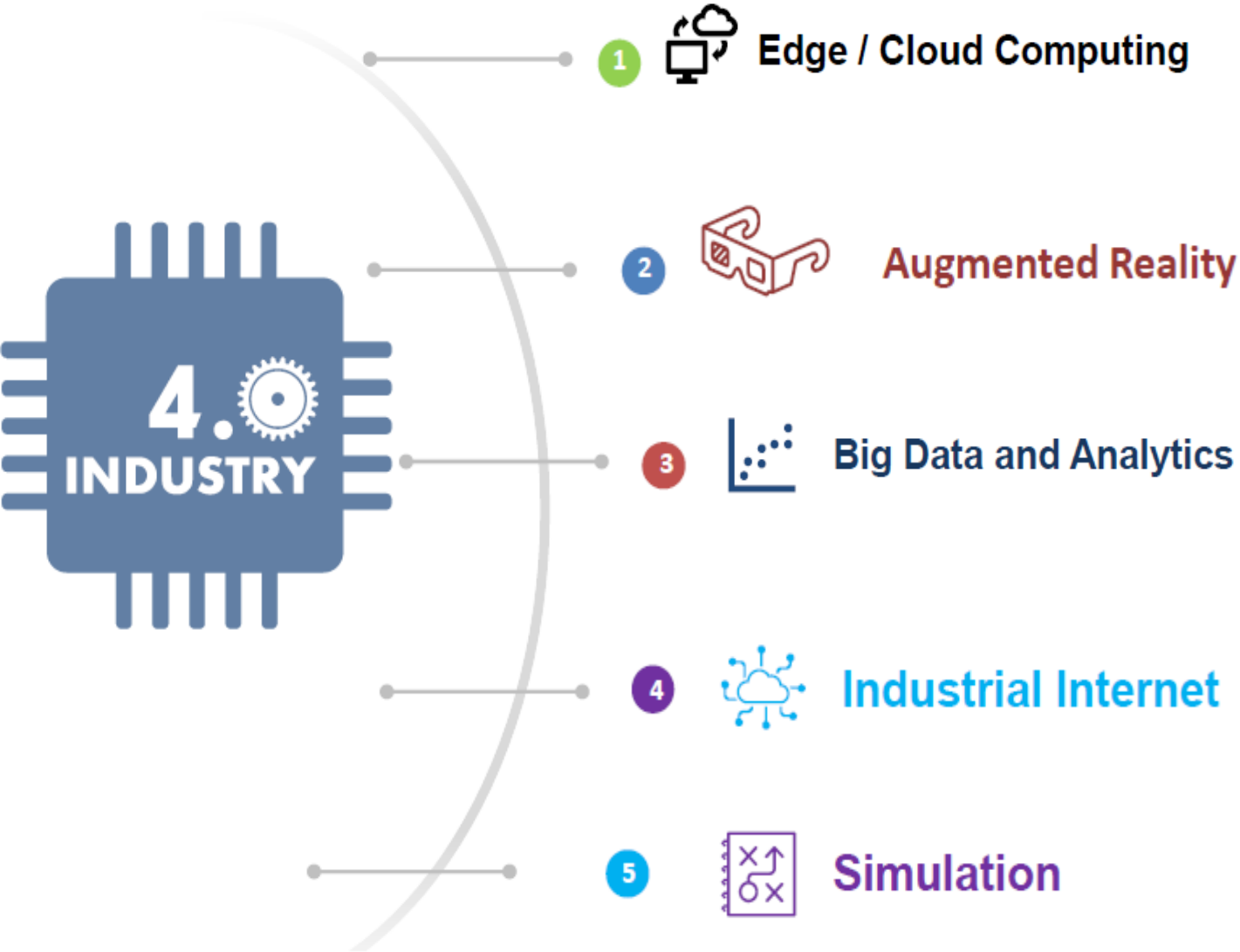
System Architecture



Digitalization Projects -Category Wise

S.No	Category Types	Number of Projects	Project Completed/ Ongoing	Project under pipeline
1	Power Optimization	12	8	4
2	Process Optimization/NVA Optimization	10	8	2
3	Reliability & Sustainability	9	7	2
4	Safety & Security	2	1	1
	Total	33	24	9





Management of hug data volumes in open cloud-based environment
Real Time communication to production systems

birlasoft **DigiLUBE** **UtlBillGeneration**

Augmented Reality for Maintenance, Logistics, and all kinds of SOP
Display of Supporting information, Trainings modules

Virtual Reality  **Microsoft Teams**

Full Evaluation/analysis of data (DCS, MES, ERP,CRM, PLCs, Sensors etc.)
Real-Time decision-making support and optimization

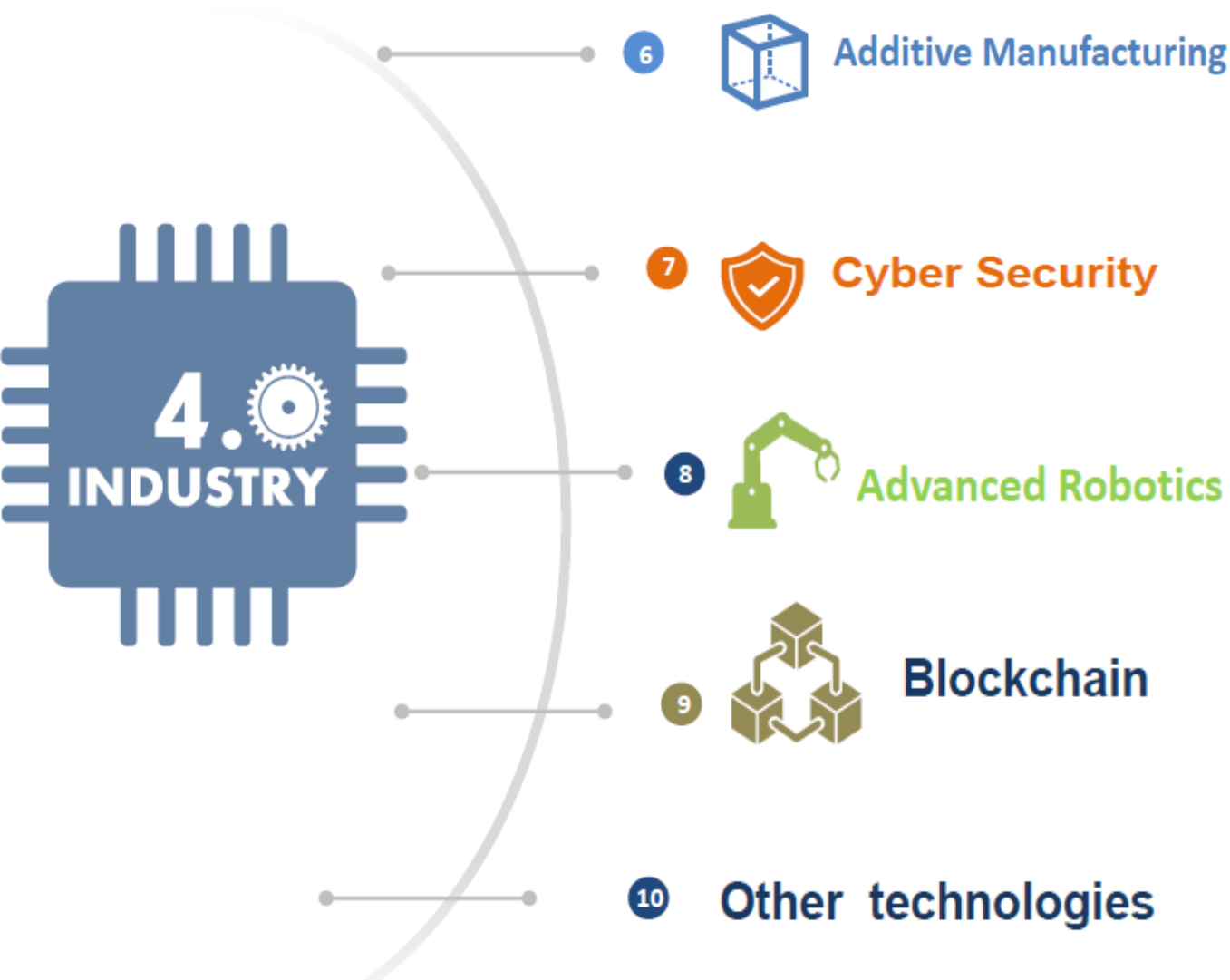
INFINITE UPTIME **ExactSpace** **MACHINEMAX**

Network of Machines and products
Multidirectional Communication between networked objects

IT-OT Integration **One ABG Cloud Platform**


Simulation of process, product and equipment
Optimization based on real time data from intelligent systems

AKXA **ABB**



6  **Additive Manufacturing**

3D Printing, Particularly to spare parts and prototypes
Decentralized 3D facilities to reduce transport distance and inventory



SMART Vison AI @ Bag Counting **autoplant**

7  **Cyber Security**

High level of security between IT-OT and IoT Systems
Defense in depth security architecture with role base authorization and access



8  **Advanced Robotics**

Autonomous Collaborative Industrial Robots
Numerous Integrated Sensors and standardize interfaces



9  **Blockchain**

Blockchain technology is a way of storing and sharing data across a network of computers using cryptography



10 **Other technologies**

Low Code-No Code, API Platforms, Advanced Materials ,

Infrastructure for AFR processing



Storage and Feeding Hoppers



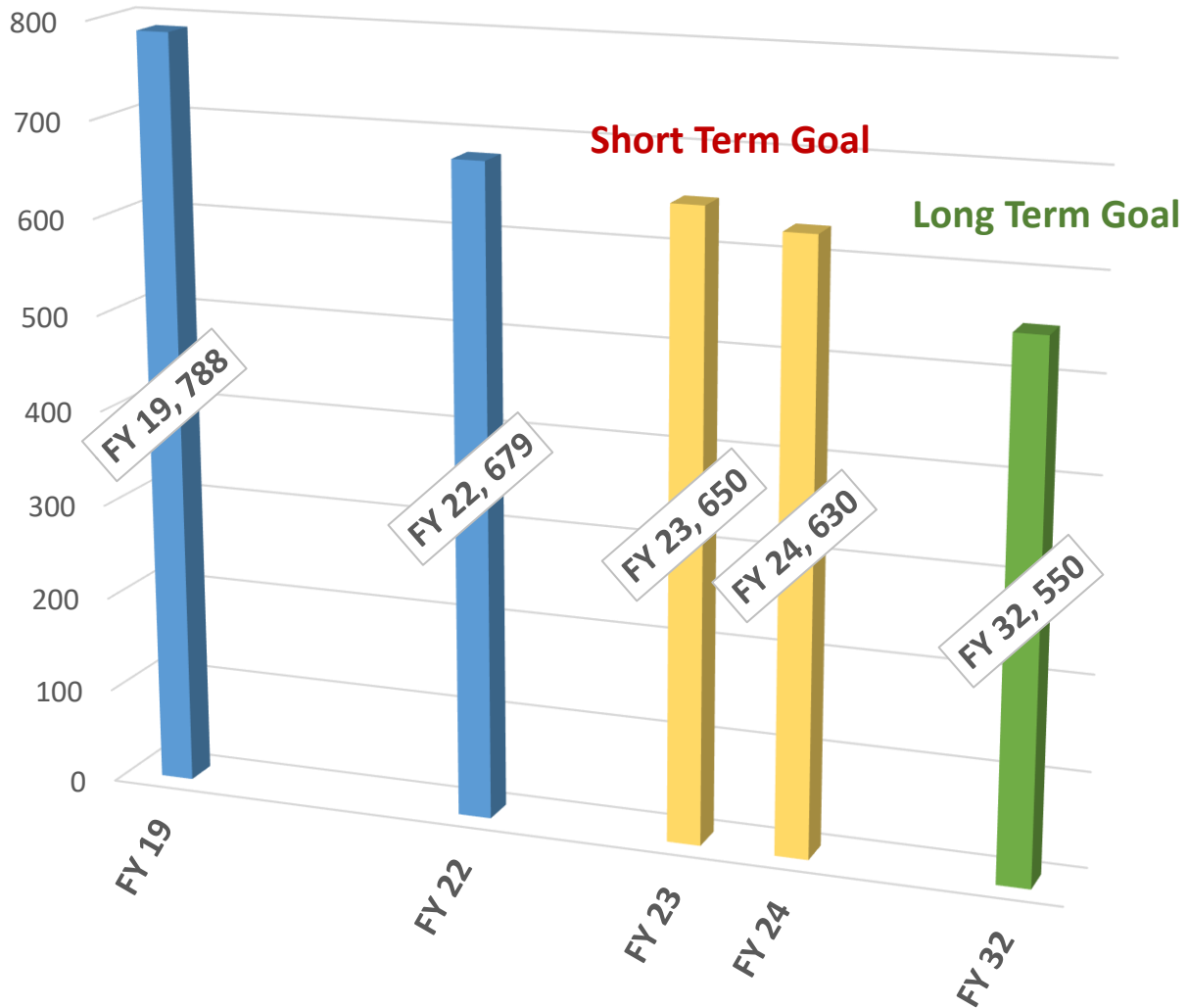
Unloading of Alternate Fuel



Mix Feeding belt



kgCO2 emission/Ton of cement



Action Plan



Increased TSR% as fuel (already using 25% in Line-3)



10MW Hybrid (Solar+Wind) plant under study/proposal



WHRS installation of capacity 13 MW in planning stage for FY-23

Ownership concept of green circle at Plant area

ULTRATECH CEMENT LIMITED
VIKRAM CEMENT WORKS

Area Ownership
TG Building (Including 7A & 7B belt)

Area Owner /Green Circle Leader
Mr. Praveen Vijayvargiya 📞 9146051929

Coordinator -1: Mr. Mohd. Tauqeer 📞 8226001527
Coordinator -2: Mr. Tarun Mandawat 📞 7694006140

"It's my area, I record abnormalities & ensure to get it corrected"

ULTRATECH CEMENT LIMITED
VIKRAM CEMENT WORKS

Area Ownership
TPP Switchyard & Substations, DG

Area Owner /Green Circle Leader
Mr. Rakesh Sharma 📞 9669869994

Coordinator -1: Mr. Hemant Sharma 📞 9669869991
Coordinator -2: Mr. Kailash Sahu 📞 8226001525

"It's my area, I record abnormalities & ensure to get it corrected"

ULTRATECH CEMENT LIMITED
VIKRAM CEMENT WORKS

Area Ownership
Coal Crusher, DM Plant & other area of TPP

Area Owner /Green Circle Leader
Mr. Brajesh Verma 📞 9669869900

Coordinator -1: Mr. A.P Shrivastava 📞 9111021416
Coordinator -2: Mr. Umesh Vishwakarma 📞 9669827987

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UltraTech Cement Ltd
Vikram Cement Works

Green Procurement Policy

1. INTRODUCTION

Green Procurement Policy is an integral part of the Sustainability policy and UltraTech Cement Ltd (UTCL) formal procedures and considerations for purchasing goods and services. Green Procurement incorporates human health and environmental concerns into the search for high quality efficient products and services at competitive prices UTCL ranks environmental sustainability as one of its top priorities and is committed to following responsible business practices by contributing to environmental protection and enhancing people performance by green procurement and services while ensuring business growth for its supply chain. Along with customers and investors interest towards green operations, it also helps reduce operational cost in the form of resource efficiency and reduced wastage. Green procurement ensures social and environmental standards from suppliers

2. SCOPE

This policy shall apply to all supply chain partners and shall impact all purchases and procurement for the organization.

3. OUR COMMITMENT

UTCL undeterred focus on good corporate governance is strengthened by our commitment to sustainable development and our short-term and long-term goals. Green procurement policy helps us make purchase decisions that are socially and environmentally responsible. It helps in improving operational efficiency, mitigate any risks including regulatory risks and enhance us as a sustainable brand. We believe that environmentally sustainable business operations have become a normative practice and forms a key part of our sustainability strategy and governance practices.

4. PROCUREMENT POLICY

UTCL seeks to reduce the environment impacts of our procurement process and also encourage our suppliers to adopt sustainable supply chain practices. UTCL shall engage with our supply chain partners and shall include the following considerations into procurement decisions

- Encouraging suppliers to deliver products/services with minimal negative impact on environment and adopt safe practices in the cycle from production to delivery
- Prefer products that are eco-friendly, energy efficient and less polluting.
- Prefer products that have energy star ratings or green certifications
- Disposing goods to authorized agencies/recyclers in environmentally friendly manner

- Using products that are water efficient and reduce water usage
- Consider Life Cycle Cost during procurement activities
- Procure less toxic products and chemicals to reduce health effects
- Utilizing clean technology and/or clean fuels
- Monitoring, evaluating sustainability performance and identifying improvement opportunities
- Reducing environmental footprints by means of material, energy & water conservation
- Encouraging logistics optimization, local buying and using Circular economy principles for waste management using 4 R (Reduce, Recover, Recycle & Reuse)
- Promoting a safe and healthy workplace for the employees
- Promoting sustainability awareness and green work culture among associates to reduce emissions
- Enhancing sustainability within their own supply chain
- Procuring recycled/part-recycled products to optimize resource consumption

5. POLICY REVIEW

The policy will be owned by Procurement team & Corporate Sustainability who will be responsible for making suitable amendments, if any, from time to time.



Unit Head

Energy Management System Standard

DNV-GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 203395-2018-IE-IND-RvA Initial certification date: 22 March 2018 Valid: 27 June 2018 - 27 June 2021

This is to certify that the management system of

ULTRATECH CEMENT LIMITED

Unit: Vikram Cement Works, Vikramnagar, P.O.Khor, District: Neemuch - 458470, Madhya Pradesh, India

has been found to conform to the Energy Management System standard:
ISO 50001:2011

This certificate is valid for the following scope:
Manufacture of cement.

ISO 50001-2018 Energy Management System Audit Certificate Valid till 2024

Place and date:
Barendrecht, 24 May 2018



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

Eris Koelk
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
DNV-GL Business Assurance B.V., 2900 DS, Zwolleseweg 1, 2994 LB, Barendrecht, Netherlands. TEL: +31 (0)20 2608000. www.dnv-gl.com

*Miles to go ...
Sky is the limit*



LS Crusher

- Team Leader- Mr. SK Pandey

Raw Mill

- Team Leader- Mr. Chandra Bhushan

Kiln & Coal Mill

- Team Leader- Mr. Azgar Ali

Packing Plant & CHP

- Team Leader- Mr. S.K.Bhoothra

Compressor

- Team Leader- Mr. Azgar Ali

TPP

- Team Leader- Mr. Ramesh Rao

False Air

- Team Leader- Mr. Sk Pandey

AFR –Consumption & procurement

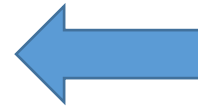
- Team Leader- Ms. Rina Shinde & Mr. Madugula Krishna Mohan

Cement Mill

- Team Leader-Mr. Chandra Bhushan

Digitalization

- Team Leader– Mr. Nitin Naik



Energy Review & Action Task Force

Daily Power Report
– Through SAP

RESOURCE	PER SECTION	ACT_FY01	ACT_FY02	ACT_FY03	ACT_FY04	ACT_FY05	ACT_FY06	ACT_FY07
CRUSHER CRUSHER								
CRUSHER CRUSHER	B. RAW MILL CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	C. RAW MILL CRUSHER							
CRUSHER CRUSHER	D. RAW MILL CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	E. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	F. RAW MILL CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	G. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	H. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	I. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	J. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	K. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	L. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	M. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	N. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	O. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	P. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	Q. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	R. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	S. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	T. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	U. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	V. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	W. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	X. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	Y. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000
CRUSHER CRUSHER	Z. COMPRESSOR CRUSHER	2,000,000	122,969,300	1,149,463,300	35,000	647,760		6,200,000

Power Summary Report
– Through SAP

Resource	PERIOD	TOTAL (KWH)	TOTAL (KWH)	TOTAL (KWH)	TOTAL (KWH)	TOTAL (KWH)	TOTAL (KWH)	TOTAL (KWH)	TOTAL (KWH)	TOTAL (KWH)
CRUSHER CRUSHER	Crusher -1									
CRUSHER CRUSHER	Crusher -2	59,201,470	605,930,120			6,200	6,120			
CRUSHER CRUSHER	TOTAL	59,201,470	605,930,120			6,200	6,120			
RAW MILL	RAW MILL-1	49,174,760	1,704,436,930			14,019	13,946			
RAW MILL	RAW MILL-2	64,899,690	1,892,199,670			14,114	14,360			
RAW MILL	RAW MILL-3	93,107,270	2,052,512,220			13,575	14,073			
RAW MILL	TOTAL	207,181,720	5,649,148,820			41,708	42,379			
COAL MILL	COAL MILL-1	12,108,890	304,114,480			42,172	47,105			
COAL MILL	COAL MILL-2	18,699,690	361,057,100			36,794	41,052			
COAL MILL	COAL MILL-3	15,571,720	469,457,700			41,435	43,145			
COAL MILL	TOTAL	46,380,300	1,134,629,280			120,401	131,302			
CHP	CHP-1	70,702,120	1,201,552,540			15,742	16,179			
CHP	CHP-2	70,699,020	1,200,004,000			14,976	15,057			
CHP	TOTAL	141,401,140	2,401,556,540			30,718	31,236			
COMPRESSOR	COMPRESSOR-1	7,482,440	225,707,470			2,624	2,704			
COMPRESSOR	COMPRESSOR-2	7,000,000	225,025,000			2,704	2,698			

Daily Energy review in
Production meeting

15-Aug-23

Power - Clinkerisation (Kwh/Clinker)	Line-1		Line-2		Line-3	
	Budget	Act Today	Act MTD	Budget	Act Today	Act MTD
1. Crusher	3.18	3.08	2.80	3.18	3.08	2.80
2. Raw Mill	20.83	20.35	20.51	20.64	20.58	20.83
3. Coal Mill	3.70	4.67	4.69	3.91	4.63	4.67
4. Kiln	23.91	24.59	24.76	23.59	24.75	24.56
5. Misc	2.61	2.42	2.50	2.61	2.42	2.50
6. Shut Down Pre Clinker	0.00	0.00	0.00	0.00	0.00	0.00
Total	54.23	55.11	55.25	53.92	55.46	55.36

Shop floor awareness among employees & workmen



CEMENT MILL



MPSS



TPP



Energy Awareness Measures :

- In-house Trainings, Seminars and External Programs on ENCON .
- Various competitions on Energy Conservation Program (Poster, Slogan, etc.) involving all Company employees, Contract employees, Housewives, School children etc.
- Poster and flex banners displayed at various plant sites
- Recognition & appreciation by distribution of Awards, token gift and Suggestion Schemes.

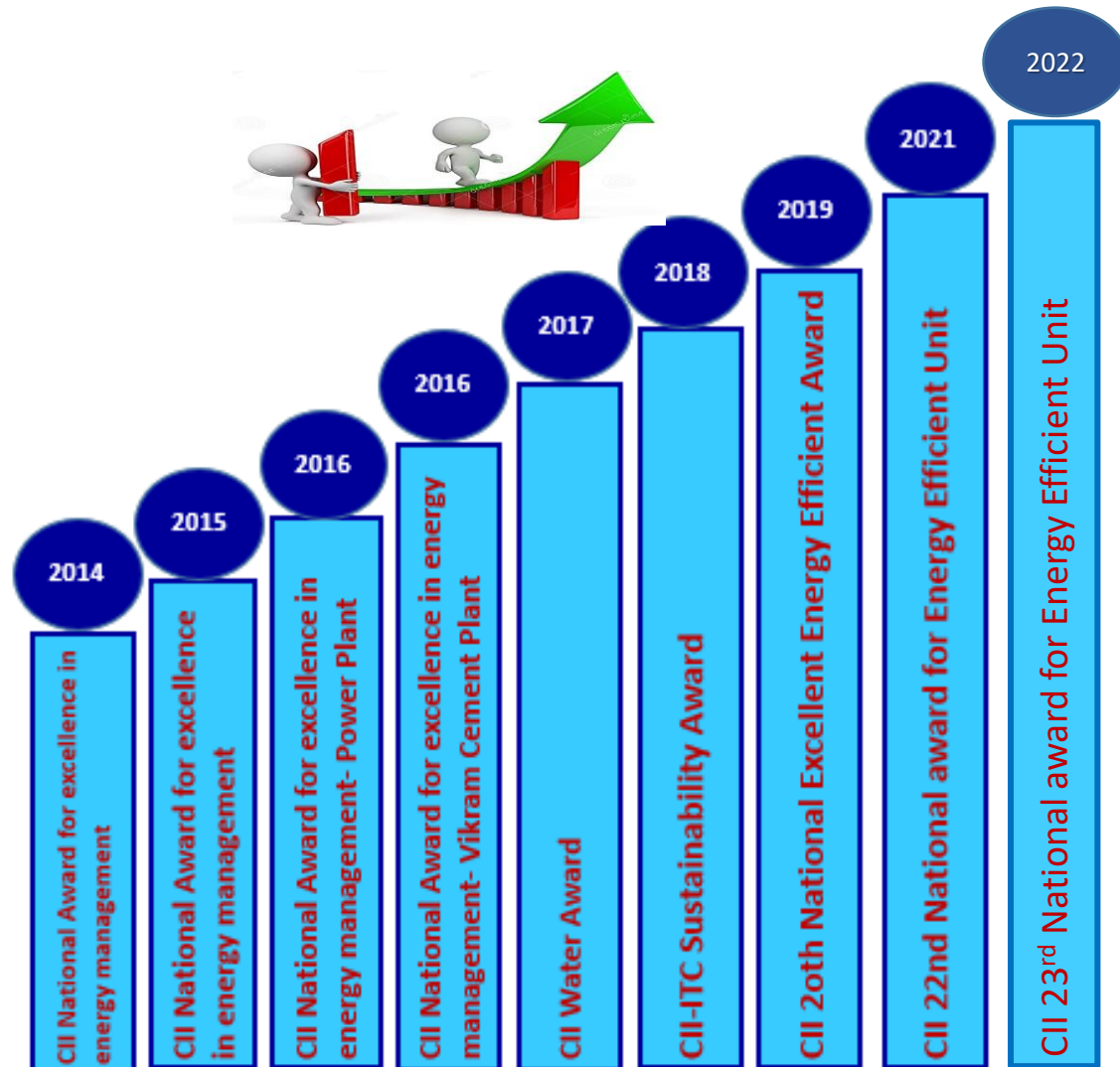


Unit-1 LT Drives Preventive Maintenance Activities Pic



Control Valve Dismantling, Gasket Replacement, stem, seat, cage, aping, blue matching & calibration

Accredited 9 Nos of Awards from CII



UltraTech Cement Limited, Unit-Vikarm Cement Work received 160 Nos. award and certification in different Categories from 1990 to till date...

Learning :

- Replication of various ideas and proven technology .
- Implementation of best practices learned from CII or other award function.
- Improving knowledge of the process and new technology.
- Avail opportunity to achieve high business benefits.
- Learned Project planning ,Execution and Application engineering.
- Enhanced uses of various QC tools, Analysis & presentation skill.

Sharing:

The Success Story of same shared among our group units of

ABG & Idea Sharing Platform “ I Love My UltraTech”



“Alone we can think so little; together we can think a lot”



Thanks for Your Sincere & Kind Attention

Presented By:

UltraTech Cement Ltd
Vikram Cement Works

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