Confederation of Indian Industry

24rd National Award for Excellence in Energy Management 2023

JSW Steel Coated Products Limited

Vasind

Presenter : Mr. Shravan Kumar – Energy Manager
Mr. Mahesh Sole- DGM Electrical

Presentation Coverage

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1. Introduction, Energy Team, Org Structure of JSWSCPL
2. Energy Consumption in last three years
3. Information on competitors, National & Global Benchmarking
4. Energy Saving Project Implemented in last three years
5. Innovative Projects implemented
6. Utilisation of Renewable Energy sources
7. Utilization of waste
8. GHG Inventorization
9. Net ZERO commitment
10. EMS and other requirements
11. Digitization & Industry 4.0 for Steel Industry
12. Stake holder involvement in energy efficiency
13. Beyond Steel - Any certification, Training, Awards

Introduction

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SCPL

100% Subsidiary of JSW Steel.

JSW Steel

- Vijayanagar – 13 MTPA
- Salem – 1.2 MTPA
- Dolvi – 10 MTPA
- JSWBPSL – 3.5 MTPA
- JSWISPL – 1 MTPA

MAIN PRODUCTS

1. Galvanizing
2. Galvalume
3. Colour coated coil & sheets
4. CRCA

STEEL

- India's leading integrated steel producers
- Installed crude steel production **capacity:~28 MTPA**

CEMENT

- Manufacturer of Portland Slag Cement (PSC), Ordinary Portland Cement (OPC) and Ground Granulated Blast
- Furnace Slag (GGBS) Operational capacity of **14 MTPA**

ENERGY

- Engaged across the value chain of power business
- Operational capacity: 4.6 GW

FOUNDATION

- Social development arm of JSW group
- Footprint across 11 states and 15 districts reaching out to 1 million individuals

VENTURES

- Early-stage, tech-focused, venture capital fund
- JSW Ventures' portfolio comprises of Indus OS, LimeTray, Purplle, Homelane and HealthPlix

INFRASTRUCTURE

- Engaged in development and operations of ports
- Operational capacity 113 MTPA

PAINTS

- Commenced operations in March 2019
- Annual capacity of 125 KL
- Only fully-automated, water-based plant in India

SPORTS

BENGALURU FC · DELHI CAPITALS · HARYANA STEELERS · INSPIRE INSTITUTE of SPORT VIJAYANAGARA

Vasind -2 MTPA

Rolling	Galvanizing	Colour Coating	CAL
CRM3 CRM4 PLTCM	CGL - 1 CGL – 2 CGL – 3 CGL - 4 Slitting -2 CTL - 2 Profiling - 3	CCL - 1 CCL – 2 CCL - 3 Embossing Line	Continues Annealing Line

Organisation Chart & EMT

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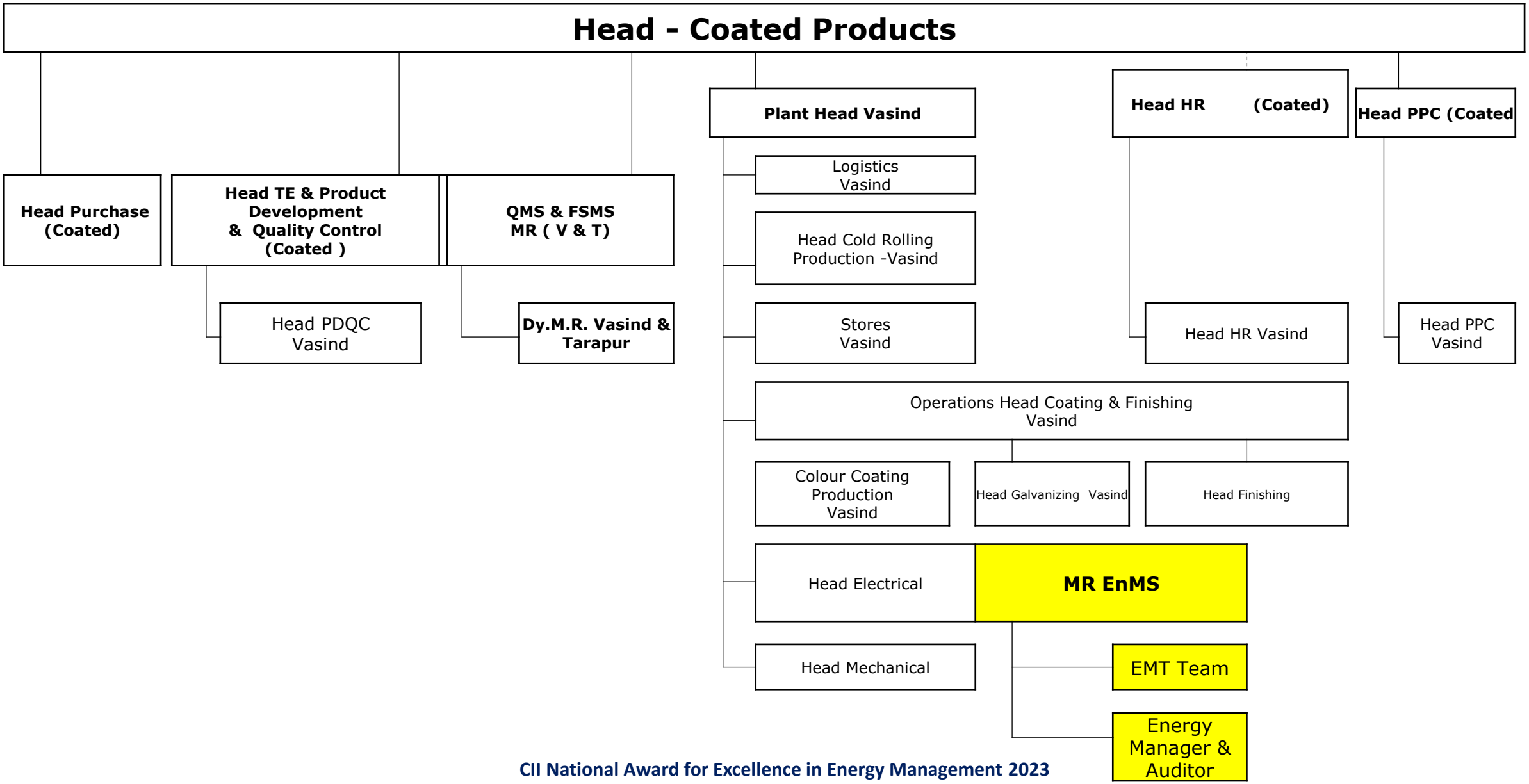
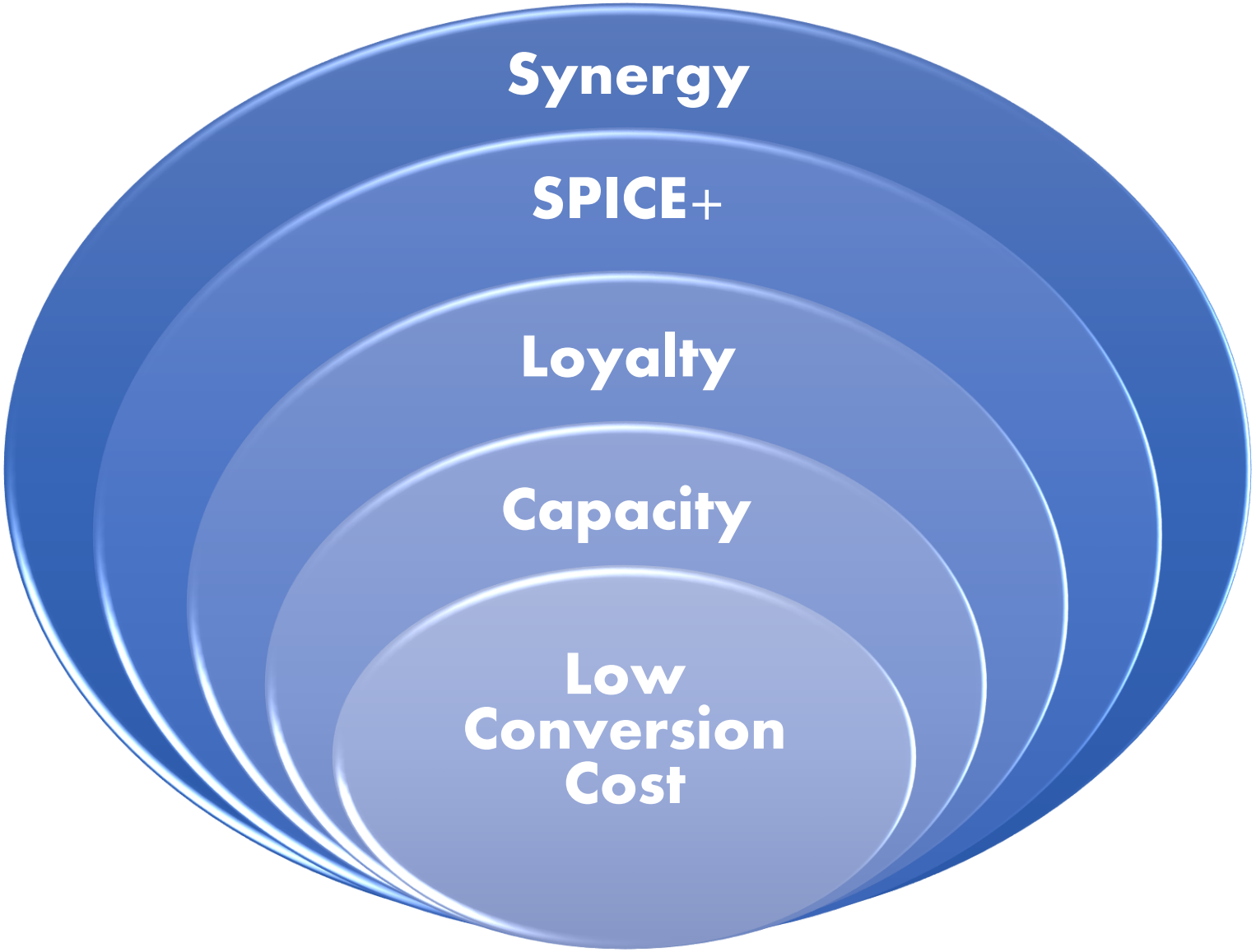


Unique Features



2. Energy Consumption Mapping

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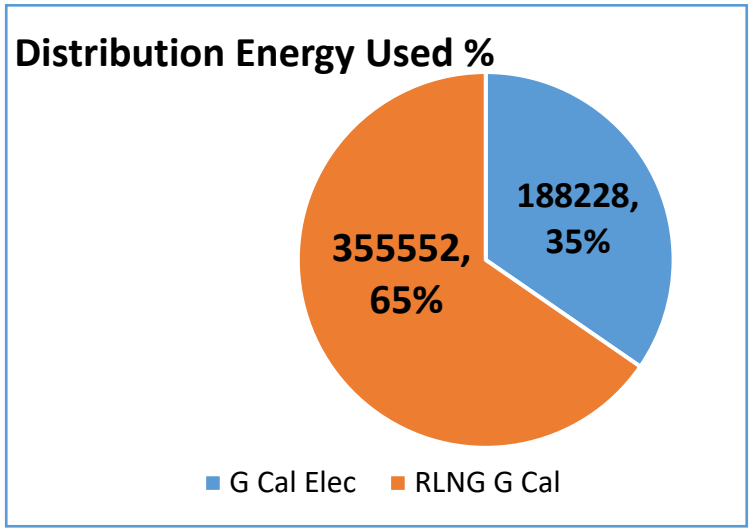
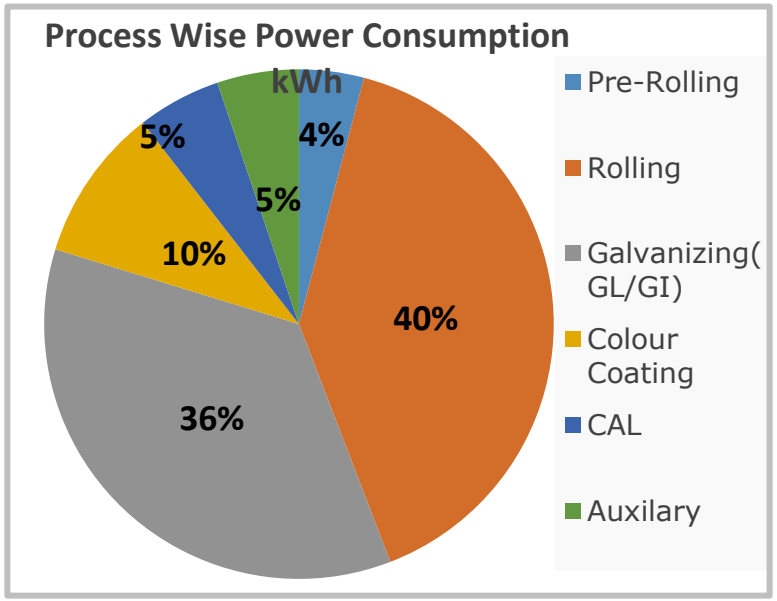


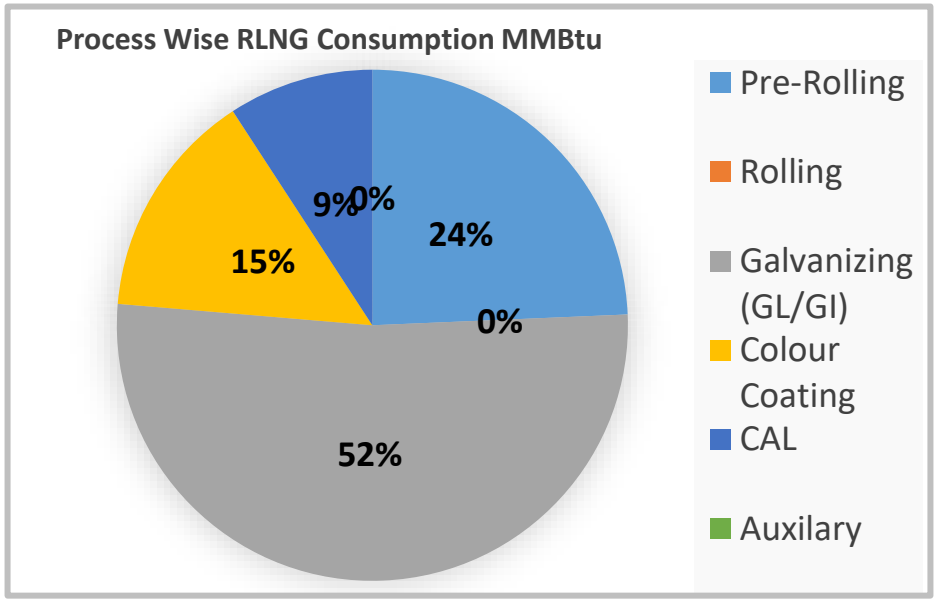
Process Wise Energy Consumption of Vasind FY-23					
Area	**Power (Lac kWh)**	**Power (Gcal)**	**RLNG (Lac MMBtu)**	**RLNG (GCal)**	**Energy in Gcal**
Pre-Rolling	90	7740	3.48	87755	95436
Rolling	877	75379	0.00	0.00	75379
Galvanizing (GL/GI)	779	66977	7.22	182161	248921
Colour Coating	214	18370	2.07	52169	70534
CAL	116	9993	1.32	33149	43131
Auxilary	114	9770	0.00	0.00	9770
Grand Total	**2188**	**188228**	**14.09**	**355552**	**543780**

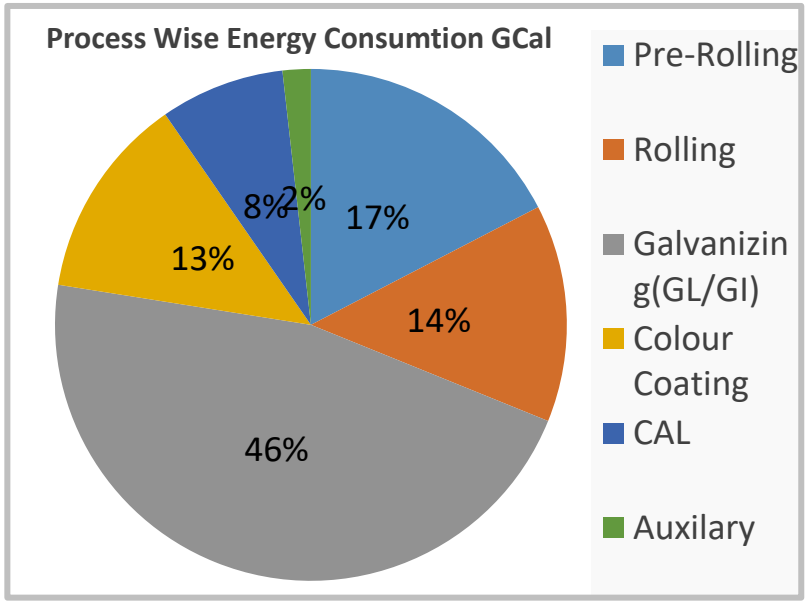
Energy Sources

RLNG (GAIL)	Electrical Power (OA)
14.30 Lacs MMBtu/A	2188 Lac kWh/A
355552 GCal/A	188228 GCal/A

Total : 543780 GCal



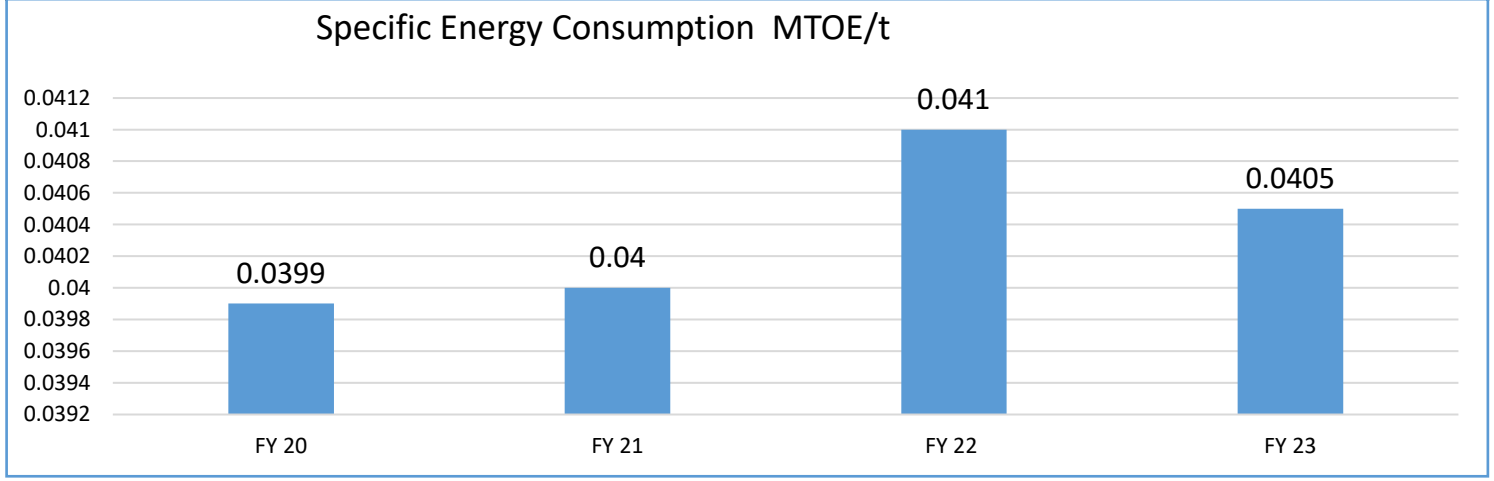


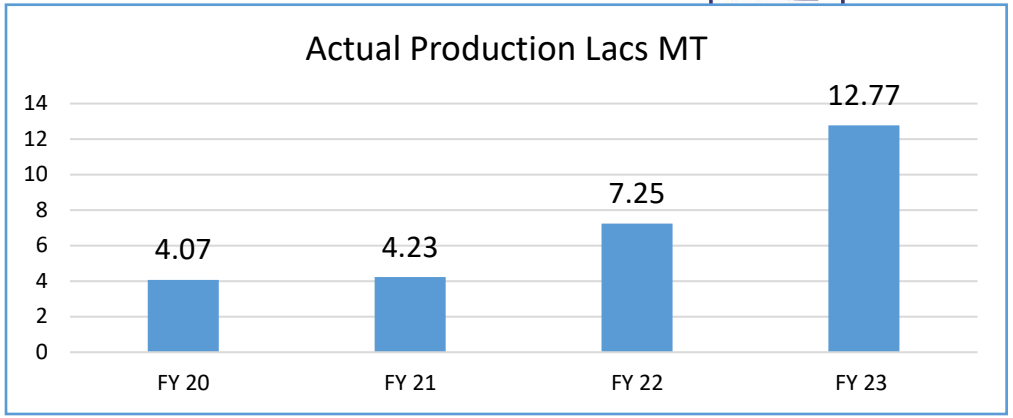


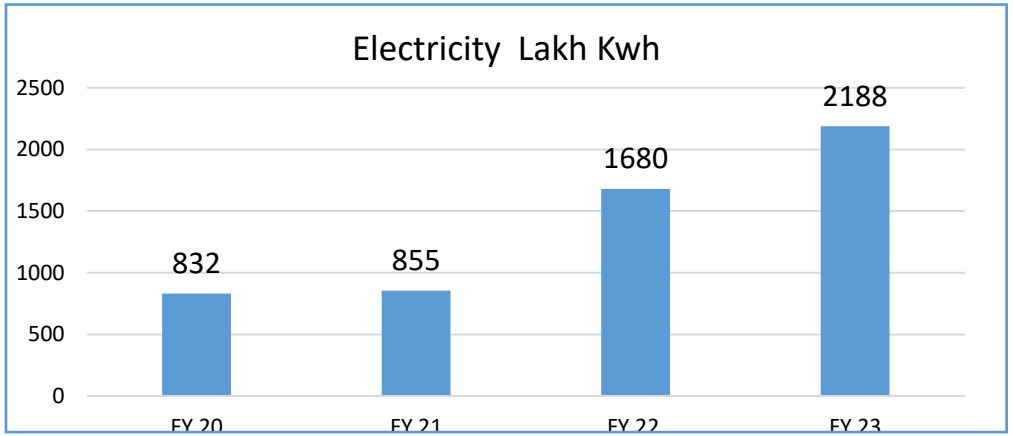
2. Specific Energy Consumption in last three years

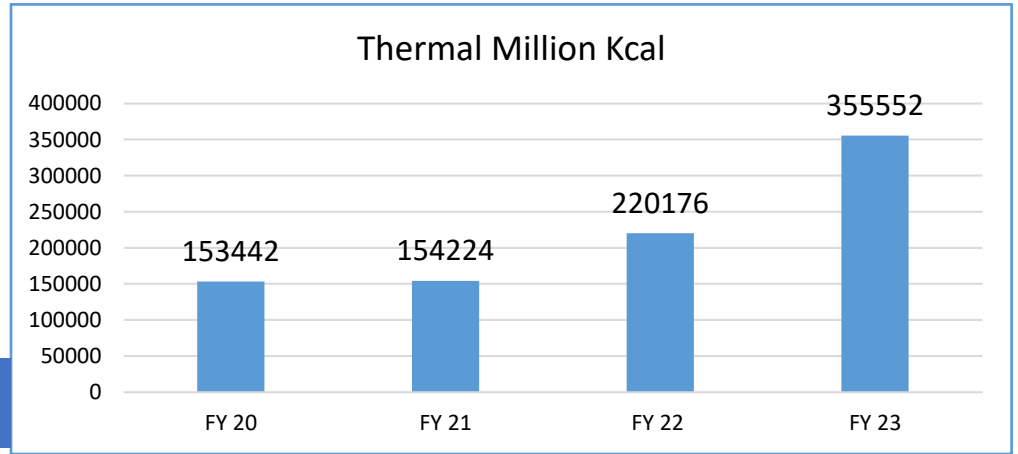
Plant Energy Consumption						
Energy	Unit		FY 20	FY 21	FY 22	FY 23
Electricity	Lakh Kwh		832	855	1680	2188
Thermal	Million Kcal		153442	154224	220176	355552
Specific Energy Consumption	MTOE/t		0.0399	0.04	0.041	0.0405

Plant Capacity Utilization						
	Unit		FY 20	FY 21	FY 22	FY 23
Installed Capacity	Lacs ton		4.5	4.5	13.5	20.29
Actual Production	Lacs ton		4.07	4.23	7.25	12.77
Capacity Utilization	%		90.4	94.0	58.6	68.7









Increase in SEC is due to forward and backward integration & change of product mix – FY23-23 SEC till Aug-23 is 0.0415 MTOE/t

2. Specific Energy Consumption in last three years Perform Achieve Trade (PAT) Cycle

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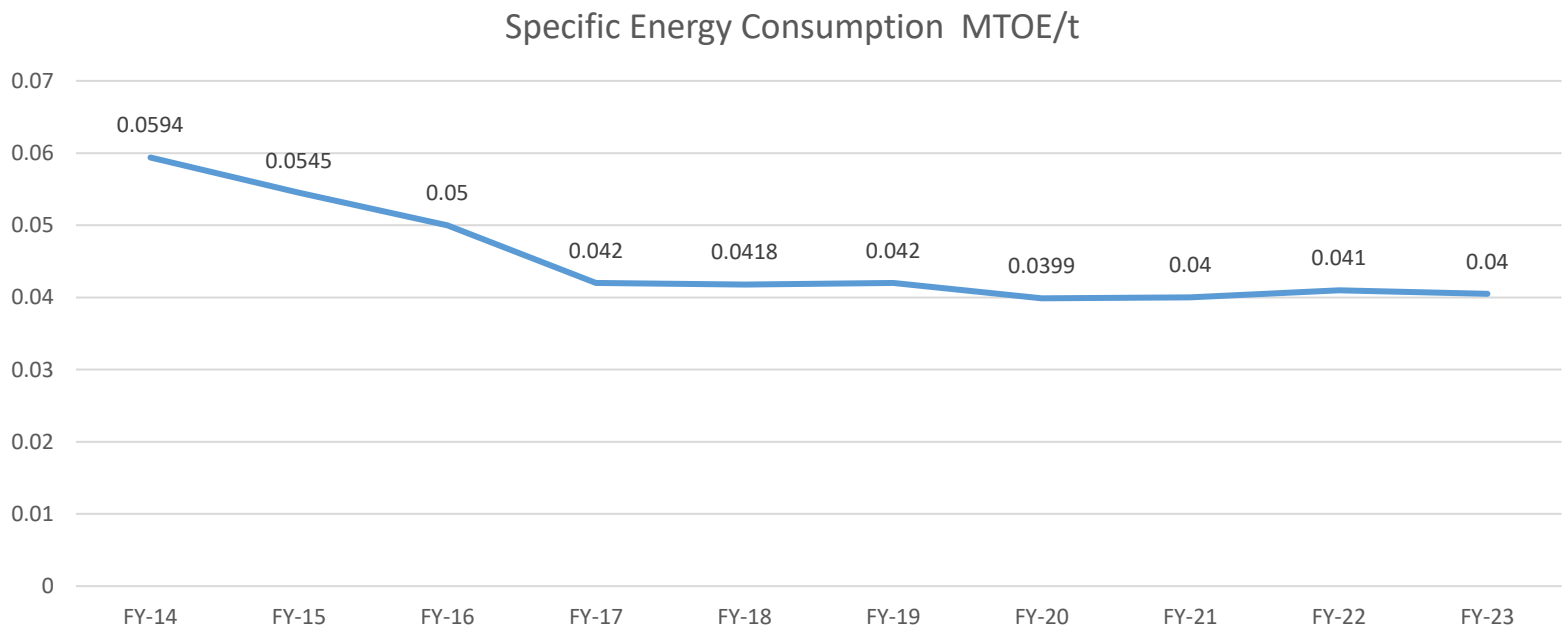
PAT-1				
Energy Consumption (MTOE/T)			Energy Saving MTOE	ESCerts Awarded
Notified	Notified Target	Achieved and Verified		
0.0594	0.0575	0.0545	2042.3	1875

PAT-2				
Energy Consumption (MTOE/T)			Energy Saving MTOE	ESCerts Recommended
Notified	Notified Target	Achieved and Verified		
0.044	0.0414	0.042	0	-294

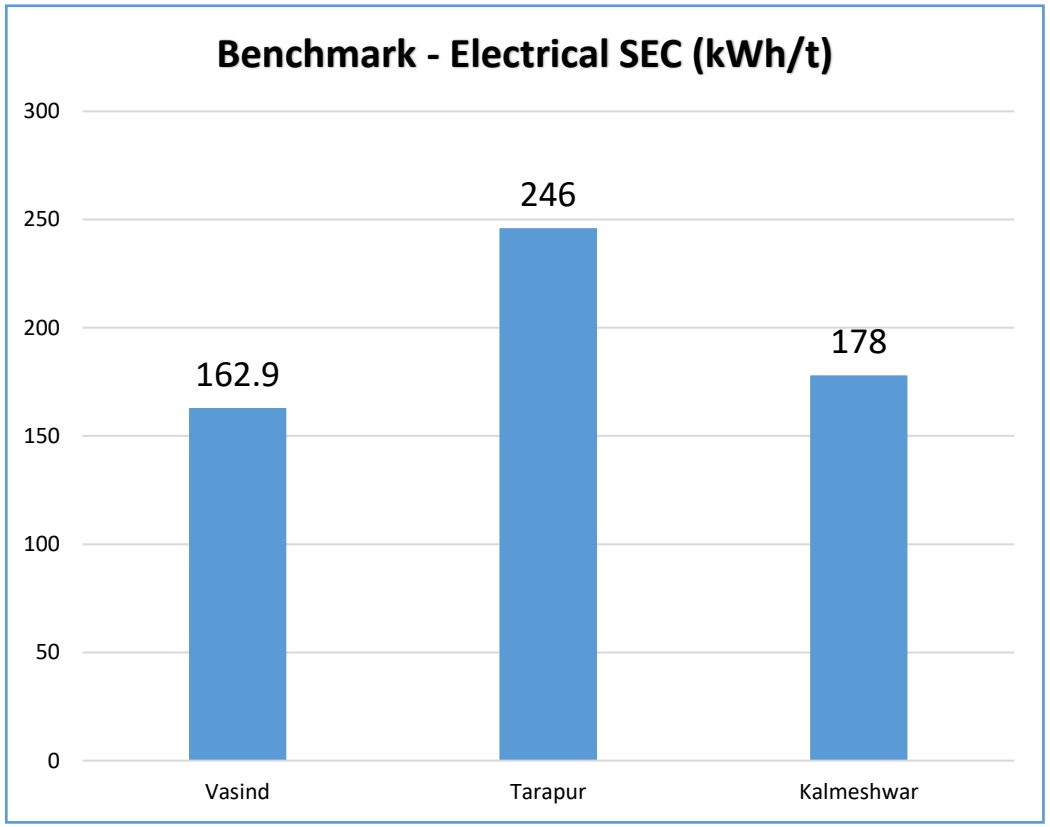
SEC Reduction in PAT-1 8.2%

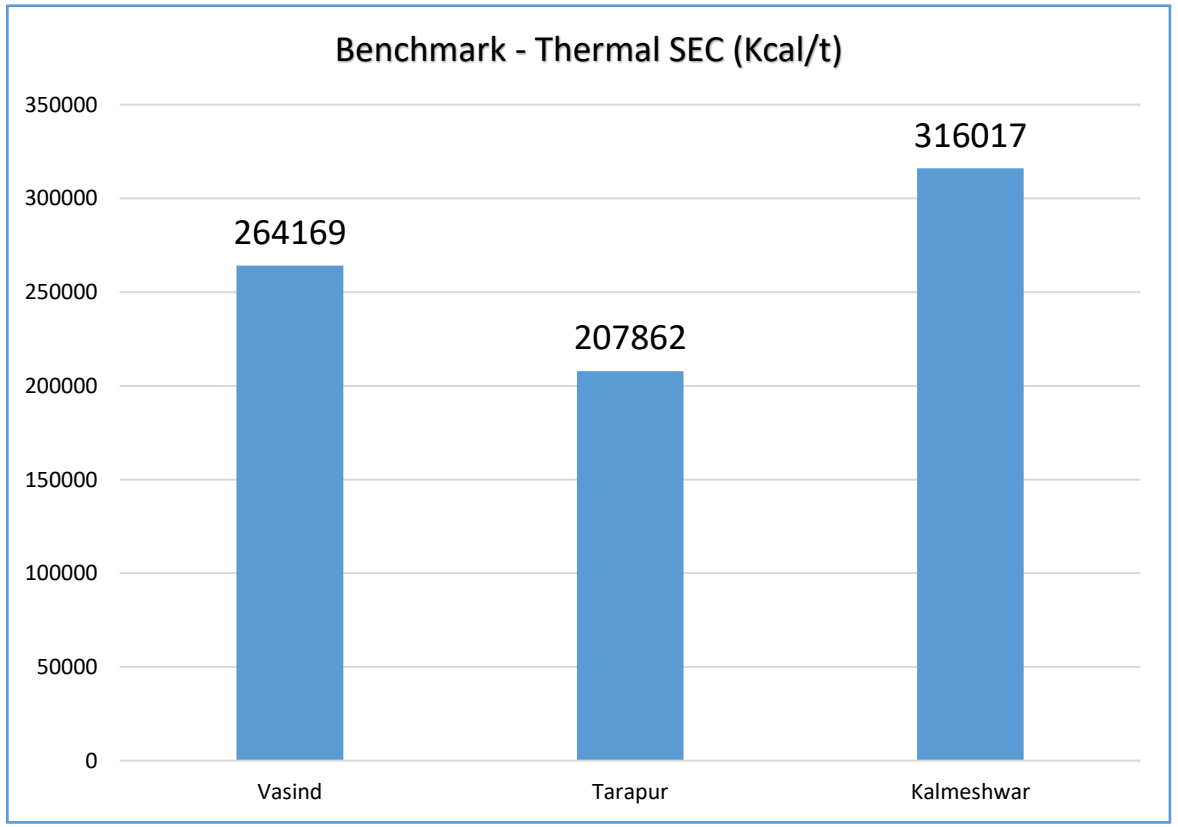


SEC Reduction in PAT-2 4.54%

SEC Reduction in Last 10 Years 32.65%

3. Information on Competitors /National & Global Benchmark





4. Energy Saving project implemented in last 3 years

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ENCON Measures FY 21

ENCON Measures	Electrical Savings (kWh)	Thermal Savings (GCal)	Savings (Rs Million)	Investment (Rs Million)	Payback (Months)
Installation of VFD in Crane LT and CT to reduce power consumption	22000	0	0.15	0.30	23.99
Improve power factor from 0.965 to 0.999 by installing APFC	1200000	0	8.18	16.00	23.46
Installation of VFD at CCL1 RTO combustion blower	80000	0	0.55	0.00	0.00
CCL-1 , All steering / staggering unit pump motor off Auto after line stopped due to any reason.	20461	0	0.14	0.00	0.00
CCL-2 , All steering / staggering unit pump motor off Auto after line stopped due to any reason.	18105	0	0.12	0.00	0.00
CGL-1, All steering / staggering unit pump motor off in Auto after line stopped for more than 15 Min.	30769	0	0.21	0.00	0.00
CCL Pump house connect with New pump of CGL-1 and CCL pump house stop. Combined use of New cooling tower pump for CGL-1 and CCL	47538	0	0.32	0.00	0.00
CCL-2 RTO is to be made off during sample testing and idle hrs	363000	0	2.48	0.50	2.42
Recoiler Staggering 1&2 Pump Motor On/off in auto according to recoiler selection.	0	1250	3.60	0.00	0.00
Total	1781873	1250	15.75	16.80	11.3

Zero Investment Projects

With implementation of above measures we have saved 2790 Gcal of total energy & mitigated 1737 tCO_2 in FY:21

4. Energy Saving project implemented in last 3 years

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ENCON Measures FY 22

ENCON Measures	Electrical Savings (kWh)	Thermal Savings (GCal)	Savings (Rs Million)	Investment (Rs Million)	Payback (Months)
Installation of 1.3 million ton PLTCM with advance energy efficient technology	5000000	0	40.5	100	29.6
Fixed power optimization by speed increased from 65 to 100 mpm	1875000	0	15.2	70	55.3
CGL-1, Br5 M1 and Recoiler Motor cooling blowers replaced with low power high efficiency blowers.	25538	0	0.2	0.2	11.6
Reduction in Compressor Power by 1700 kWh/Day. A. Installation of Flow meter in air lines B. Leakage arrest at all unit. C. effective loading /unloading setting.	561000	0	4.5	0.7	1.8
Installation of pyrometer and close loop control of Induction oven and blower	340000	0	2.9	0.5	2.1
Total	7801538	0	63.33	171.40	4.4

With implementation of above measures we have saved 6708 Gcal of total energy & mitigated 6319 tCO_2 in FY:22

4. Energy Saving project implemented in last 3 years

ENCON Measures FY 23

Objectives (FY-23)	Potential Saving				Investment Required Rs Lac
	kWh/A	RLNG (MMBtu/A)	G Cal/A	Rs Lac/A	
Rectify the steam traps and increase the condensate recovery (2% Reduction in RLNG)	0	4080	1028	84	50
Install ControlAiR Intelligent Flow Control (IFC) System for air compressors (10% Red in Compressor Power)	620500	0	534	43	100
Replacement of Old inefficient motors with IE3/4 Motors (4% Red)	79200	0	68	6	20
Replacement of CT/LT of 5 nos. Old cranes slip ring control with VFD (20 Units/Day)	36500	0	31	3	25
CGL-2 CAG D1 blower replaced with high efficiency blower	323000	0	278	23	15
CRM-3 Fume Exhaust blower replaced with high efficiency motor	269000	0	231	19	15
CRM3-Conversion of DC to AC motors and speed increased from 450 to 1400 mpm to optimize power & increase productivity.	1250000	0	1075	88	6000
HBR and Calm section heater auto control	253440	0	218	25	10
DC to AC drive conversion system at RW 4	6558	0	6	0	60
Total	6870198	4080	6936	572	3795

With implementation of above measures we have saved 6936 Gcal of total energy & mitigated 5806 tCO_2 in FY:23

4. Energy Saving project implemented in last 3 years

Continual Improvement

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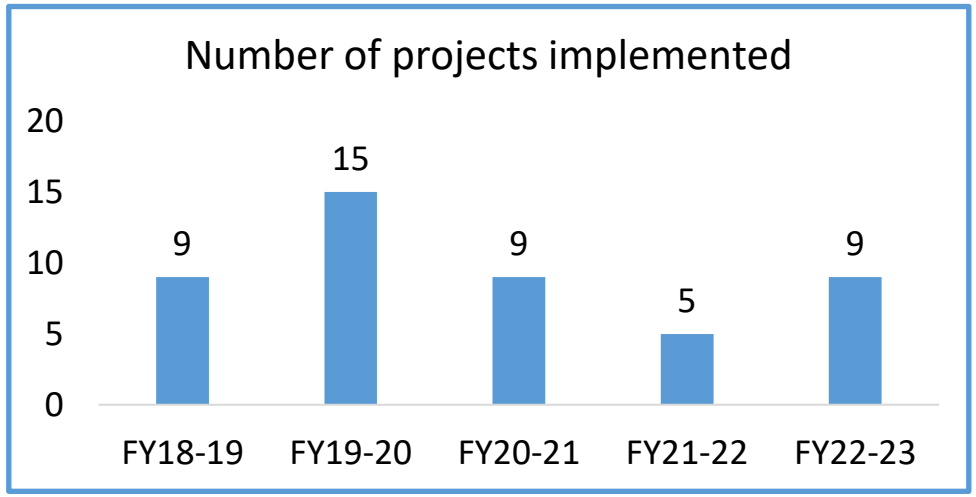

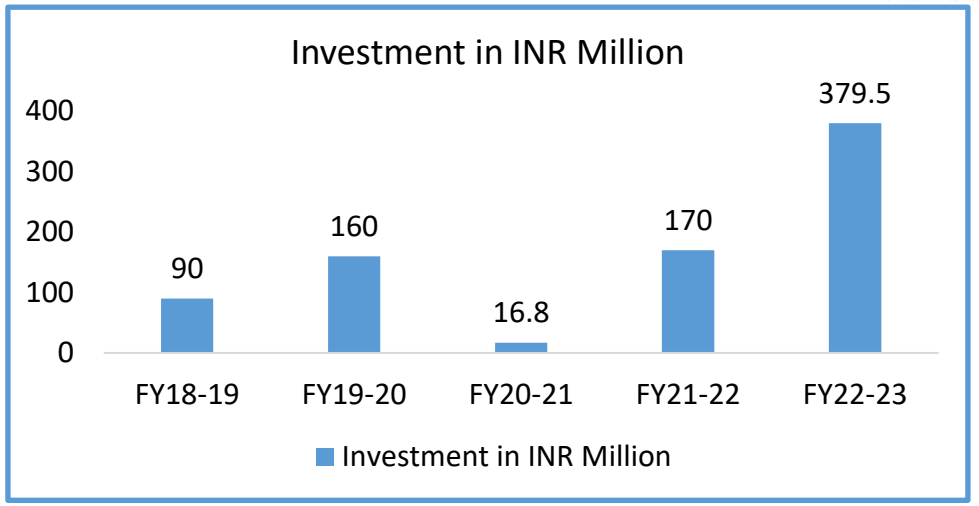

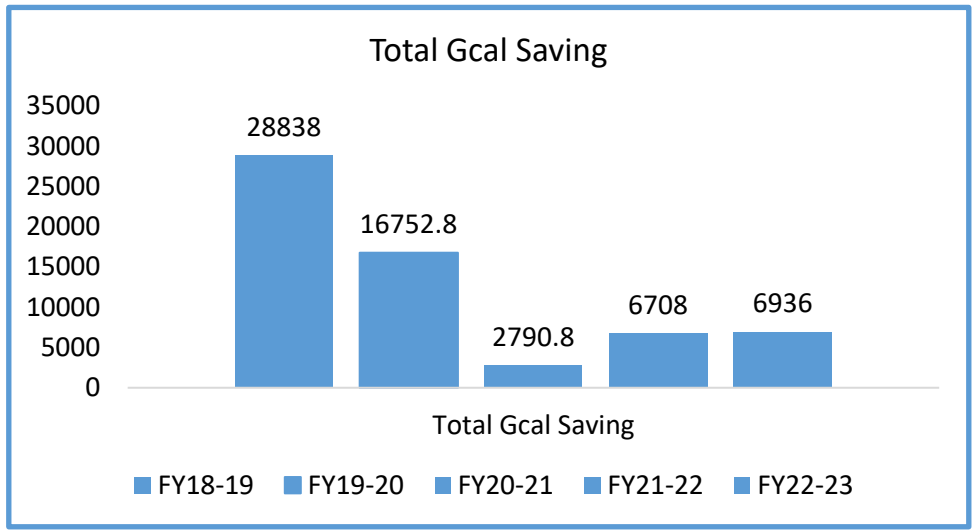

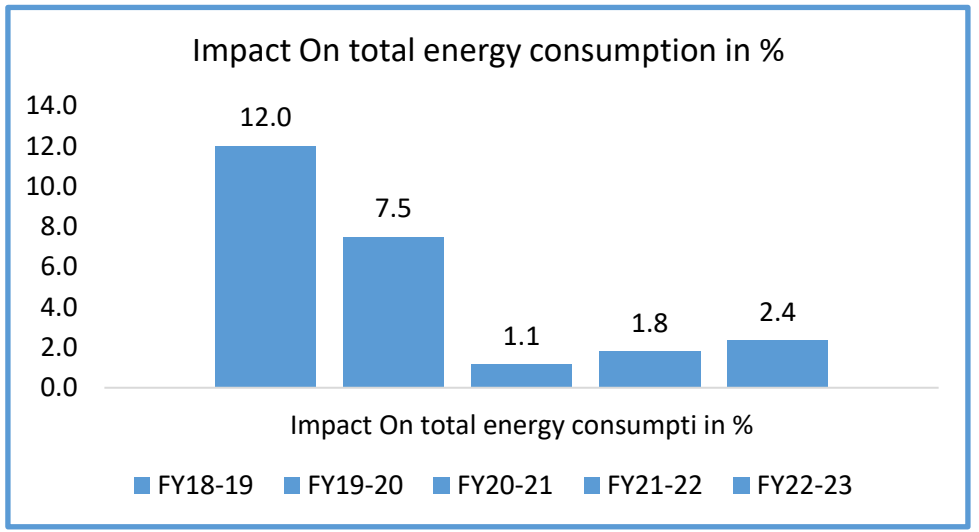

With implementation of energy saving measures, total energy saving of 16434 Gcal achieved and 13862 tCo2 mitigated in last three years

4. Energy Saving project planned for FY:2023-24

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1) Energy Efficiency measures

Energy Efficiency measures planned for FY:2023-24

Sr. No.	Equipments	Objectives	Target
1	All Line	Procure various energy consuming equipment on the basis of Life Cycle Cost criteria mentioned in PR	100% compliance
2	CGL-2	Installation of Inverted U type furnace at CGL 2	10% reduction in RLNG consumption
3	Plant level	Focus on Carbon Neutrality Road Map – with Timelines and % Reduction of FY30 baseline.	Carbon Neutral by FY 30
4	CCL	Rectify the steam traps and increase the condensate recovery (CCL and Pickling)	2% reduction in Boiler RLNG Consumption
5	PKL	Rectify the steam traps and increase the condensate recovery (CCL and Pickling)	2% reduction in Boiler RLNG Consumption
6	Plant level	Replacement of Old inefficient motors 20 nos total 388 KW with IE3/4 Motors (CGL1/CGL2/CRM4)	4% Reduction in Power consumption
7	Plant level	Replacement of CT/LT of 3 nos Old cranes slipring control with VFD (CGL1 202 and 201/ CRM4 301)	20 Units/Day/Crane
8	CCL2	Installation of New RTO	20% reduction in RLNG Consumption
9	CGL2	Installation of VFD for Emergency CGL2 N2 Booster compressors	20% reduction in power consumption from 7.5kw to 6kw

4. Energy Saving project planned for FY:2023-24

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1) Energy Efficiency measures

Energy Efficiency measures planned for FY:2023-24

Sr. No.	Equipments	Objectives	Target
10	CCL-1,2	CCL 1 and 2 Degreasing pumps stop in auto with line stop.	5% Reduction in Power consumption from 95 Kw to 90 Kw
11	CGL1/CCL1&2	Common water pump for CGL1 and CCL 1 & 2 by installing VFD	300 Units/Day
12	CCL1,CAL	CCL1, CAL steam trap and condensate recovery with PPPL pumps	4000 units/A and 500 MMBtu/A
13	CCL 1 & 2	Replacement of V belt at CCL with cogged belt Total 1152 Kw load 3% saving	302735 Unit/A
14	CRM 4	Low efficiency M4 Elgi compressor replaced with high efficiency copmressor (M4 0.201 Unit/CFM and M3 0.216 Unit/CFM)	2500 Units/Day
15	PLTCM	PLTCM condensate recovery by PPPU pumps	36960 Unit/A and 4588 MMBtu/A RLNG
16	Plant level	Installation of roof top solar panels in Opex model at Vasind	4032000 Unit/A

With implementation of above measures, total l energy Saving is expected to be 11138 GCal

5. Innovative Project Implemented

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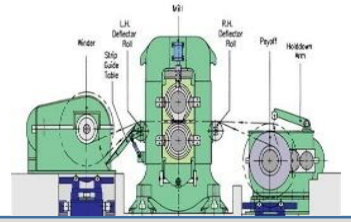
Innovative project-1. CRM3 revamping – Inverter Technology upgradation

BEFORE



Cold Rolling with DC drives and outdated mill design

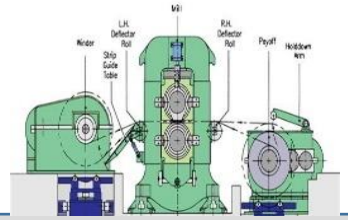
Power
70 kWh/t

Energy Consumption
0.060 Gcal/t

Investment Rs.60 Cr

Turn around

AFTER



Cold Rolling with AC drives with advance Mill design

Power
65 kWh/t

Energy Consumption
0.055 Gcal/t

Energy Saving-1250 Gcal/A @ 0.25 Million Ton Production

5. Innovative Project Implemented

Innovative project-1. CRM3 revamping – Inverter Technology upgradation

Uniqueness of Project

- DC to AC Motors
- Speed enhancement 450 to 1400 mpm
- Increase in Productivity
- LV VFD drives & advance Level –II automation
- Modification with latest design
- Use of Energy Efficient AC motors

Energy Saving

Energy Saving-1250 Gcal/A @ 0.25 Million Ton Production

5. Innovative Project Implemented

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Innovative project-2. : Use of Hydrogen in place of Ammonia - reduction in Ammonia Cracker power consumption

- To crack ammonia we have heat it to 850 Deg.C for which we had two heaters of 90 KW each
- Use of cracked Ammonia leads to impurity in quality of coated product hence decided to use pure Hydrogen. This is used as reducing agent inside in the galvanizing furnace. Heater KW-90*2

Heater Capacity(KW)	Run Hrs.	Power Consumption(Kwh)
180	8640	1555200

Results Achieved:

- Yield improvement by 1 %
- Reduction in overall plant Ammonia by 20 %
- Increased productivity by 5 %
- Ammonia Cracker power consumption eliminated

- Implementation of this project resulted in energy savings of 1337.472 Gcal/Annum
- Horizontal deployment of the project is planed on other CGL Lines

5.Innovative Projects Implemented

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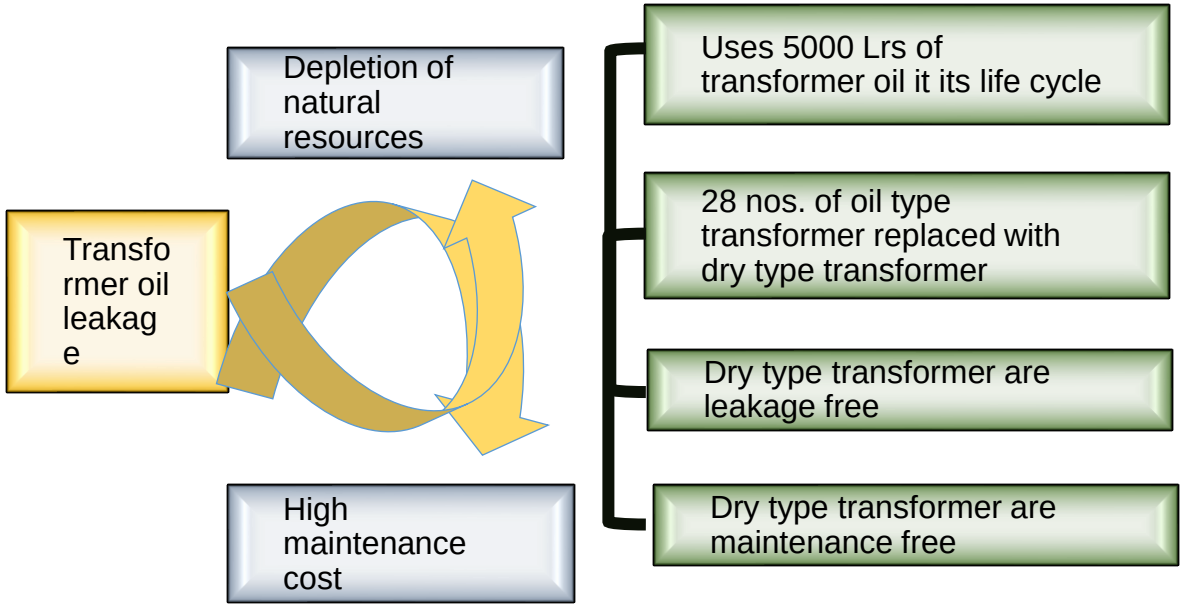
Innovative Project-3 :- Resources optimization :Use of dry type transformer in place of Oil type transformer reduction in use of mineral oil

Problem

- Each oil type transformer uses around 5000 Ltrs of transformer oil in it life cycle so by replacing it with dry type transformer we can save natural resources
- Dry type transformer are Leakage and maintenance free



Benefits

- With the installation of 28 dry type transformer,140000 Ltrs of transformer oil in transformer life cycle
- Leakage and maintenance free transformer"

5.Innovative Projects Implemented (Project-3)

Innovative Project-4 :- Reduction in losses of thinner, primer & back coat at CCL line through use of bulker system for back coat paint and primer procurement.

Problem

In existing condition following challenges were faced

- ❑ **More manual work in**

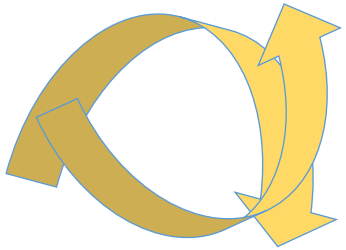
a) Multiple time loading and unloading of paint barrels by forklift
b) Multiple time shifting paint barrels from paint yard to coater room.
c) Every time cleaning empty paint barrels.
d) Shifting empty cleaned barrels to paint yard.

- ❑ **Higher thinner consumption avg. 0.5 ltr for cleaning of each 1 barrel.**
- ❑ **Entry gate blockage with empty barrels.**
- ❑ **Losses in each paint barrels avg. 0.5 ltr**
- ❑ **Above challenges were causing the more losses of thinner , primer, back coat paint due to more nos. of barrel.**

Project activities

TOT system made ready, having capacity of 1200 litres

inspection of incoming paint barrel's lock before unloading



Instead of smaller barrels, bigger volume paint truck is now being used.

Benefits

1. Consumption of thinner cleaning for primer and back coat drum cleaning reduce to zero.
2. Smooth operation of substrate truck
3. Reduction in Manual work for shifting barrels for primer & back coat.
4. Reduction in thinner consumption (0.5 liter for each barrel cleaning).
5.Reduction in cotton usage which were used in cleaning of barrel.
6.Reduction in disposal of paint soaked cotton.
7. Paint yard load reduced 5 tyre to 2 tyre stacking.
8. Zero paint barrel bursting case.
9. Improved housekeeping.
10.Zero plant stoppage due to blockage.
11. REDUCTION IN ORDERING COST OF PRIMER & BACK COAT BY Rs 2.5 per liter. "
12. Total avg saving per month Rs : 465150

6. Utilization of renewable Energy Sources

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Renewable Energy generation

Installation of Root Top Solar Panels JVM School and cafeteria

Use of Transparent Sheet for natural lighting in plant

Use of ECO - VENTILATOR

Rain Water Harvesting

Financial year	Technology (Electrical)	Type of Energy	Onsite/ Offsite	Solar System (kWp)	Solar Power (kWh)	Total power used Million kWh	% Used
FY 20	PV	Solar	Onsite	5.5	93294	80	0.11
FY 21	PV	Solar	Onsite	5.5	92294	85.5	0.11
FY 22	PV	Solar	Onsite	5.5	90294	186.2	0.05
FY 23	PV	Solar	Onsite	5.5	90294	188.2	0.05

FY	Total Power (MU)	RPO TARGET		REC PURCHASED		Value Rs Lac
		SOLAR	NON SOLAR	SOLAR	NON SOLAR	
FY 20	78.6	2751	9969	2751	9969	228
FY 21	87.3	874	7863	0	0	0
FY 22	161.728	2021	15364	0	0	0
FY 23	188.228	2021	19327	0	0	0
TOTAL	**489.356**	**7667**	**48560**	**2751**	**9969**	**228**

Actual FY : 21-22	Target FY-23	cumulative FY: 22-23
Specific Water Consumption	Specific Water Consumption	Specific Water Consumption
M3/MT	M3/MT	M3/MT
0.26	0.37	0.23

Installed ZLD unit of 1500 KLD and achieved 45% reduction in fresh water consumption

7. Waste Utilization and Management

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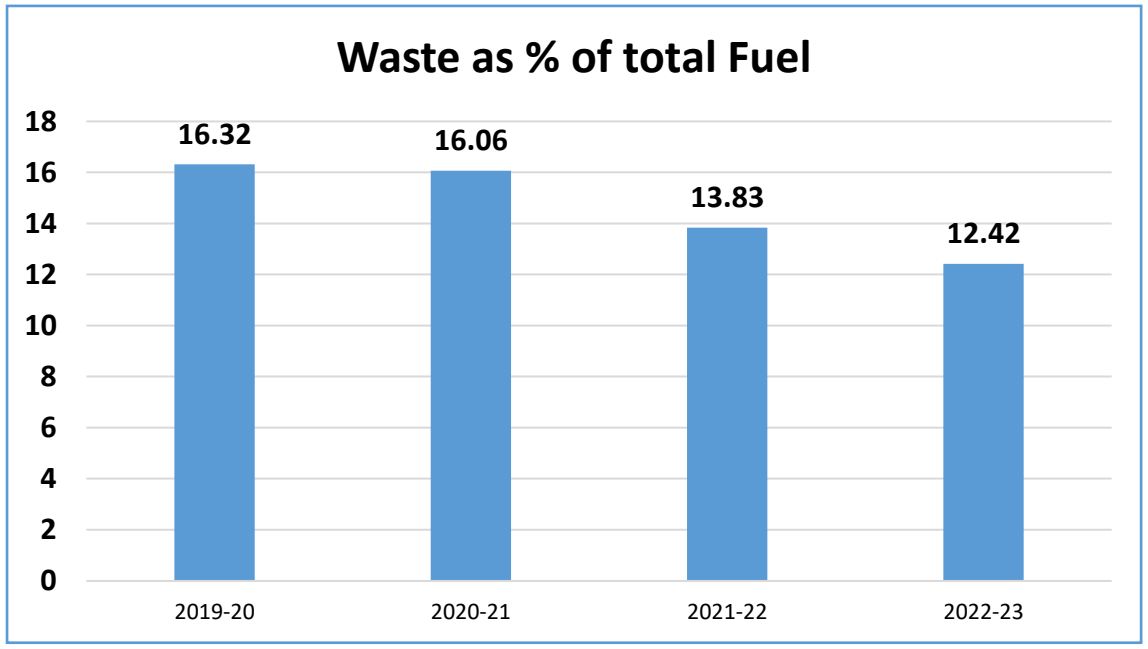
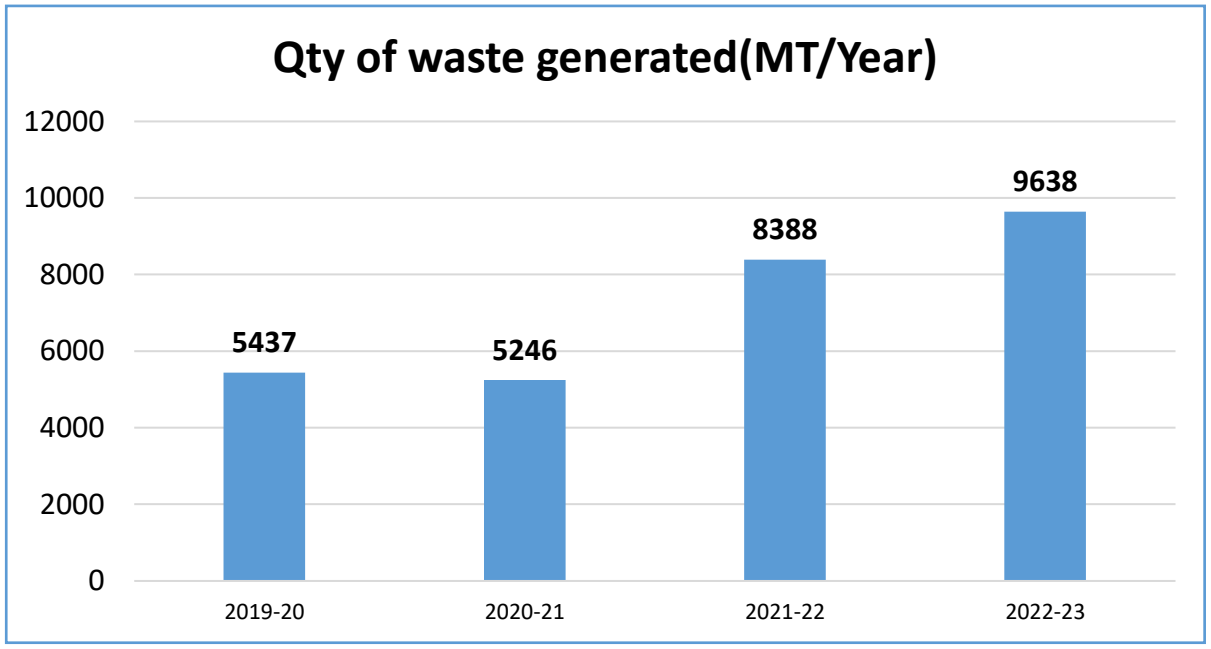
S. No.	Year	Waste Details	Quantity	GCV kCal	Heat Value M kCal	Waste as percentage of total fuel
1	2019-20	Paint VOC	5246	7000	36722	16.32
2	2020-21	Paint VOC	5409	7000	37863	16.06
3	2021-22	Paint VOC	8388	7000	58720	13.83
3	2022-23	Paint VOC	9638	7000	67466	12.42





*VOC- Volatile organic compound

8. GHG Inventorization

Confederation of Indian Industry

Sr No	Detail of Area Green Zone	Area (Sq Mtr)	Total Trees	Shrubs	Lawn Sq Mtr
1	Factory inside	40676	1800	8500	25800
2	R.C Farm House, Guest House	91475	2500	8000	85000
3	SVTC, Other open Space	42000	350	100	1500
4	Colony 1,2,3	21866	650	1500	21866
		196017	**5300**	**18100**	**134166**

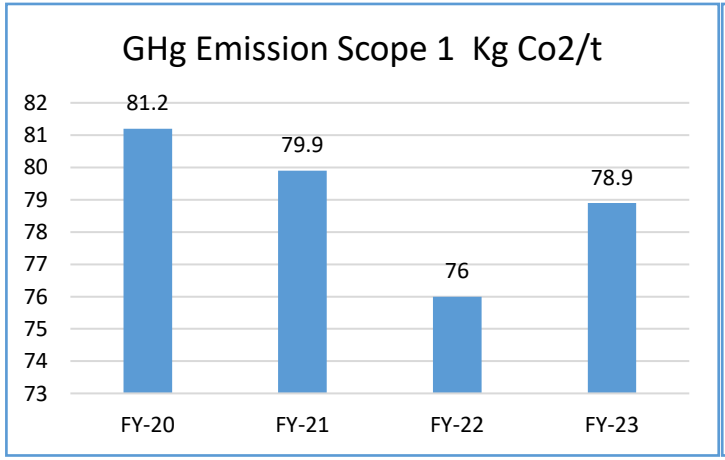
As on Date --->	8568	17235	102555
Total Tree planted -→	**128358**		
CO2 t / year Offset	25671.6		

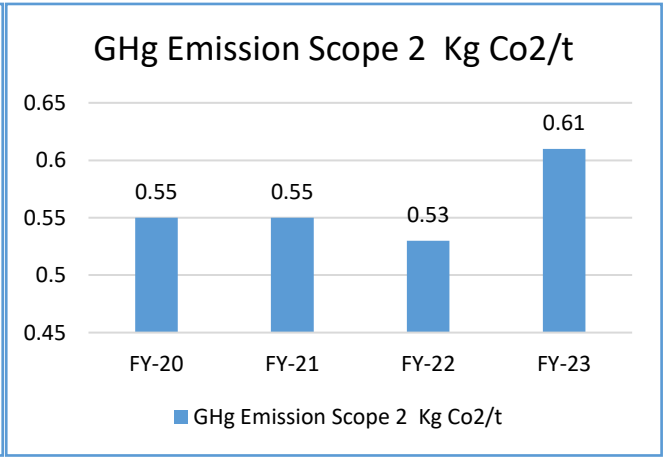
Calculation based on Carbonify.com 5 trees for 1 ton of CO2 /year

Sustainability and GHG CO2 emissions

Target to reduce the CO2 Emission by 3% in FY-24 and to become Carbon neutral plant by Fy-30, by adopting following initiatives-

1. **Conversion of DC to AC for both the Old Cold rolling Mills- FY-23(CRM-3 revamping completed)**
2. **Installation of 35 MWp Solar power plant by JSW Energy for coated business-FY-25**
3. **Use of Hydrogen in Furnace**
4. **Replacement of all the old AC motors with IE-3 Motors- FY-26(more than 70% motors are IE3/4)**
5. **Plantation of 50000 trees till FY-30 every year - 5000**





Reasons for increase in GHG emission

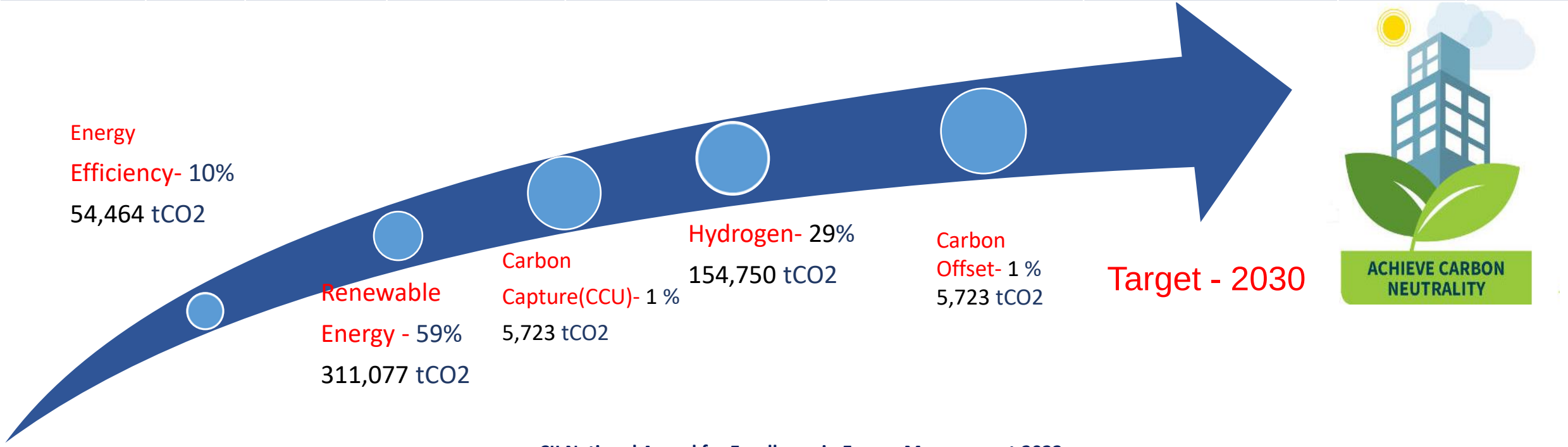
1. Trial runs of newly commissioned lines CGL-3,4 , CCL-3, CAL
2. Addition of new process lines (CGL-3,4 , CCL-3, CAL) FY
3. Increase of CRCA,PPGL and Galvalume which has high SEC

We report GHG data to JSW group's headquarters every year

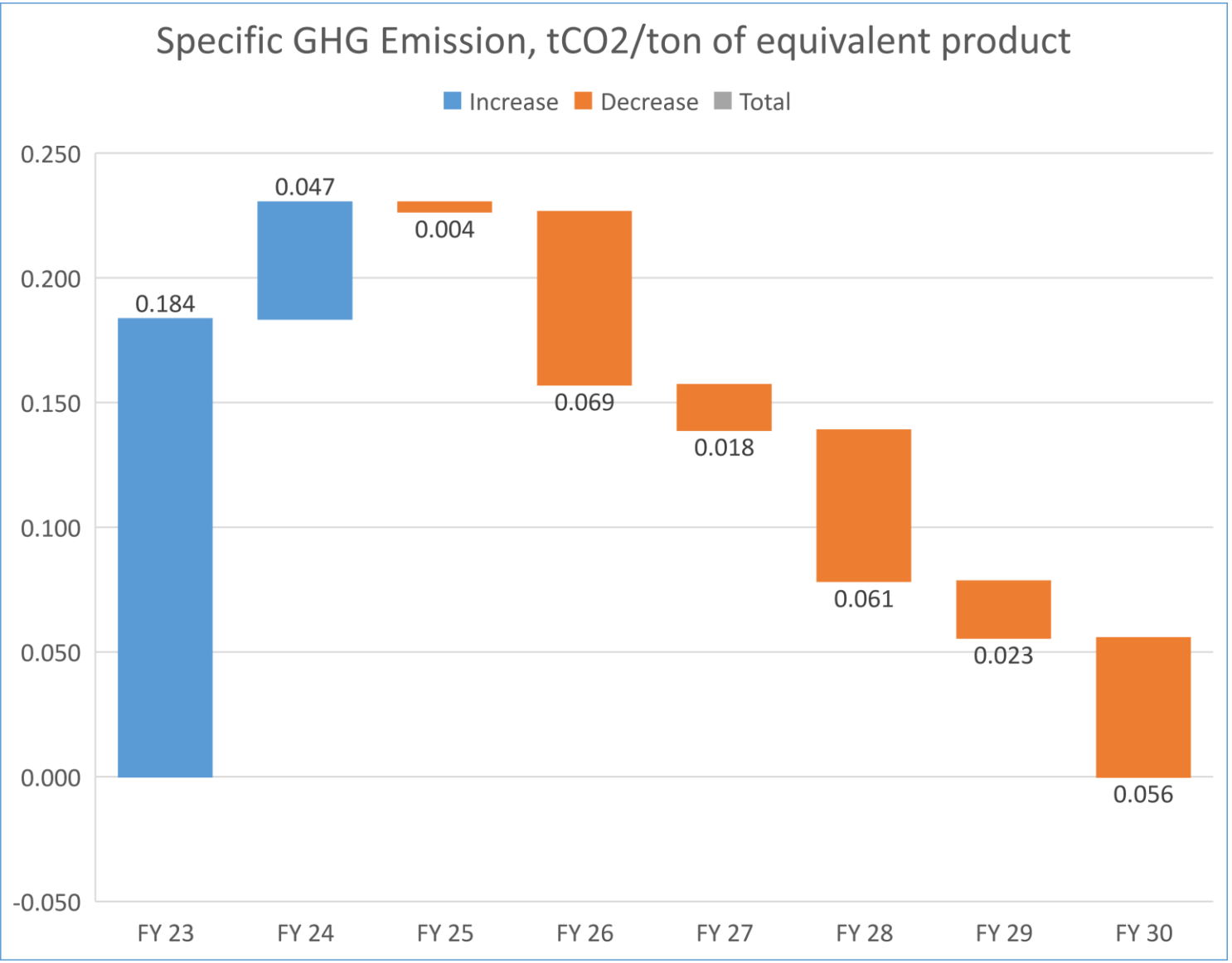
9. Roadmap towards Net-Zero emissions – Carbon Neutrality

Confederation of Indian Industry

Parameter	Unit	VASIND	Reduction in 10% Energy Consumption	Replacement of 59% Electrical Power by Renewable Energy	Reduction in 1 % GHG emission using CCU	Reduction in 29 % GHG emission using Green Hydrogen	Reduction in 1 % GHG emission using Carbon offset	Final Carbon Emission
CO2 Emission	tCO2	529,954	-54,464	-311,077	-5,723	-154,750	-4,143	0
	%	100	10	59	1	29	1	0



9.Roadmap towards Net-Zero emissions – Carbon Neutrality



Month / Year	Project	Reduction, TCO2/TCS
Aug-26	53 MW Solar Renewable power	0.065
FY26	CCU	0.003
FY23-FY30	Energy Efficiency	0.025
FY27	Hydrogen use in furnace - CDS5	0.015
FY28	Hydrogen use in furnace	0.014
FY29	Hydrogen use in furnace	0.021
FY28	RE part-2	0.043
FY29	RE part-3	0.032

10. EMS and Other requirements

ISO System Implementation

Energy Policy	Board Displayed, Awareness sessions
ISO 50001	Energy Review, SEU , EnPI
Annual Objective	EC--> COC→ OPCOM→ Individual KRA
Audits	Internal Cross location audits, External Audits
Review	SPICE, Daily, Weekly, Monthly
Monitoring	Power & Fuel consumption Monitoring through EMS
Training	Internal, External, Technical, EnMS trainings

JSW Better Everyday

JSW Steel Coated Products Limited

ENERGY POLICY

We are committed to efficient utilization of all types of energy. We shall achieve this through continual improvement in energy performance by:

- Monitoring and controlling consumption of all types of energy.
- Setting energy conservation objectives and targets and provision of information and resources for their implementation.
- Purchase of energy efficient products and services.
- Use of energy efficient designs in new, modified and renovated equipment's and processes.
- Comply with all applicable legal and other requirements related to energy use, consumption and efficiency.
- Reviewing Energy Policy, Energy Objectives & Targets annually and updated as necessary.

We shall encourage use of renewable energy and promote awareness of energy conservation among persons working for and on behalf of our organization.

Date : 16.12.2022
Revision No. : 08

Sharad Mahendra
CEO

10. EMS and Other requirements

Energy Review

Confederation of Indian Industry

Identification of SEU's For-Fy 23-24 Location - Vasind Process - All

DCN Plant Code -Department Code-Process Name-Serial No.

Rev- XXX Rev Date...xxxxxx

Sr. No.	Process / Equipment	Production (t)	Consumption /Year				Thermal Consumption/year in Gcal				Total Energy	Consumption in %			Annual Saving Potential of Energy Consumption			% Annual Saving Potential of Energy Consumption			Legal requirement	Top Management guidelines	Significant Energy Use (SEU)	Selection Criteria (Select 1,2 or 3, 4 as given below)
			Power	RLNG	FO	Steam	RLNG	FO	Steam	Total		% of Total Power	% of Total Thermal	% of Total Energy	Electrical Energy	Thermal Energy	Total Energy	Electrical Energy	Thermal Energy	Total Energy				
			KWh	MMBtu	t	Kg	Gcal	Gcal	Gcal	Gcal	GCal	%	%	%	Lakh kWh	GCal	GCal	%	%	%	Y/N	Y/N	Y / N	
	Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!				

Criteria -1 : More than 8 % of total power or total thermal or total energy used to be considered as Significant. *(Applicable for Vasind)*
Criteria -2 : 2% Annual Saving of Energy Consumption. **Criteria 3** - Legal requirements other than PAT & RPO **Criteria -4** : Top management guidelines .

Methodology for deciding the SEU's priority

Name of SEU	Annual Saving Potential of Energy Consumption	Investment Required	Required Down Time	Annual Saving Potential of Energy Consumption (Gcal)	Investment required	Required down time	Score	Priority (P1..P2... etc.,)
	GCal	Rs in Lacs	Days	A	B	C	A X B X C	*
							0	P1
							0	P2
							0	P3
							0	P4
							0	P5
							0	P6
							0	P7

" * " = Priority of SEU to be decided based on above methodology in descending order of score . Eg. P1 top priority and so on...

A) Annual Saving	
5	More than 1000
4	More than 500
3	More than 250
2	More than 100
1	Less than 100
0	Not Identified

B) Investment required (Rs.	
5	Less than 10 lacs
4	More than 10 lacs
3	More than 15 lacs
2	More than 25 lacs
1	More than 50 lacs
0	Not Identified

C) Required down time	
5	Less than One day
4	Less than three days
3	Less than five days
2	Less than seven days
1	More than seven days
0	Not Identified

Methodology for deciding the SEU on % Annual Saving Potential of Energy Consumption

% Annual Saving Potential of Energy Consumption in Electrical Energy or Thermal Energy or Total Energy in respective process	2%

Prepared and Verified
EMT

APPROVED BY
HOD

Distribution through E-mail to concerned HOD's

DCN : JJ-EnMS-PR-01, Rev.1, Effective from 1st Oct,2021

10. EMS and Other requirements

ISO System Implementation

Confederation of Indian Industry

Audit

- BEE Energy Audit
- ISO Audits
- External Audits

Review

- S — Safety Systems, Compliance & Governance
- P — People
- I — Innovation & Quality Management
- C — Customer Delight
- E — **Energy,** Environment & Safety

QMS
ISO 9001 2015
Valid – Dec, 2023

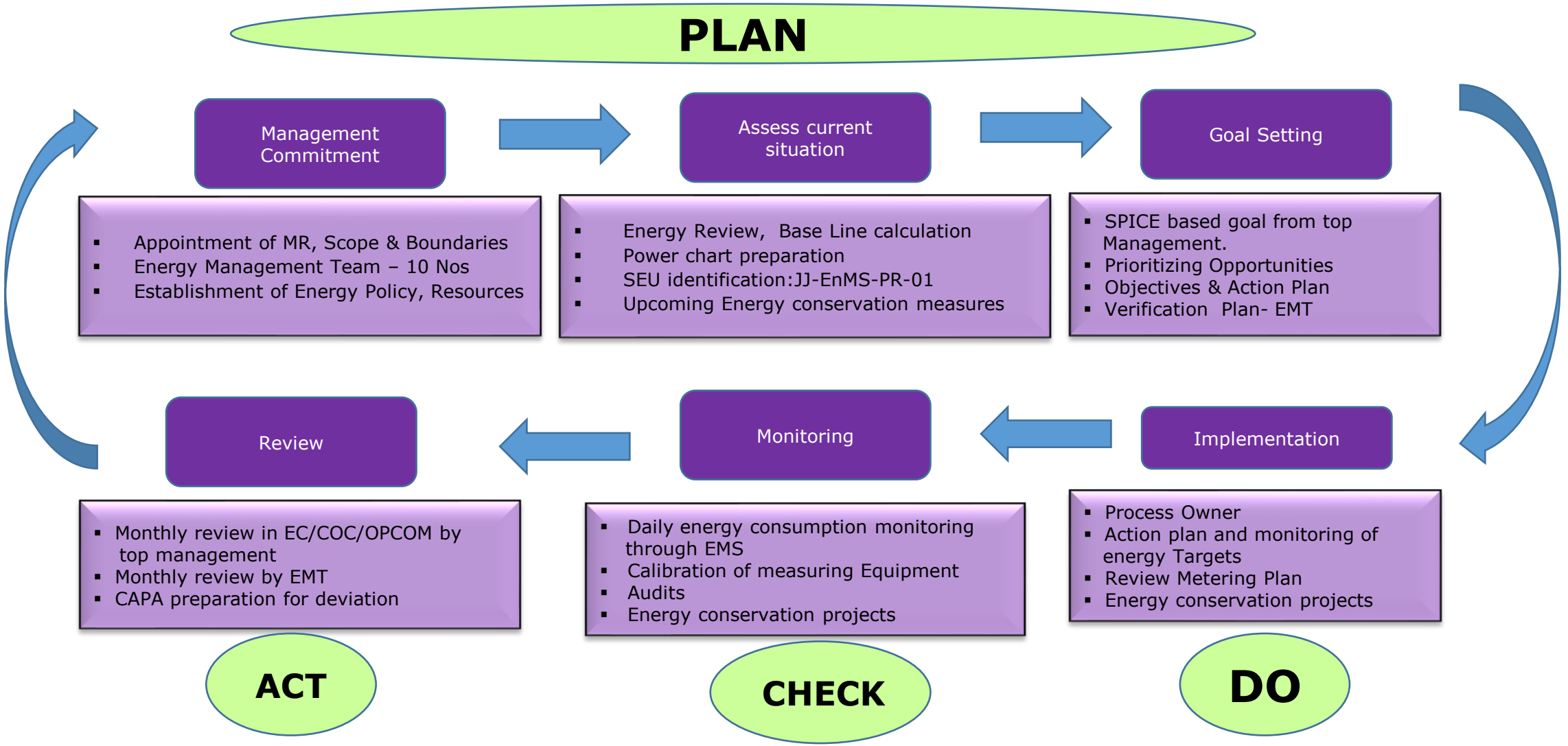
OHSAS
ISO 45001 2018
Valid – Mar, 2025

EMS
ISO 14001 2015
Valid – Apr, 2024

EnMS
ISO 50001 2018
Valid – Apr, 2025

10. EMS and Other requirements

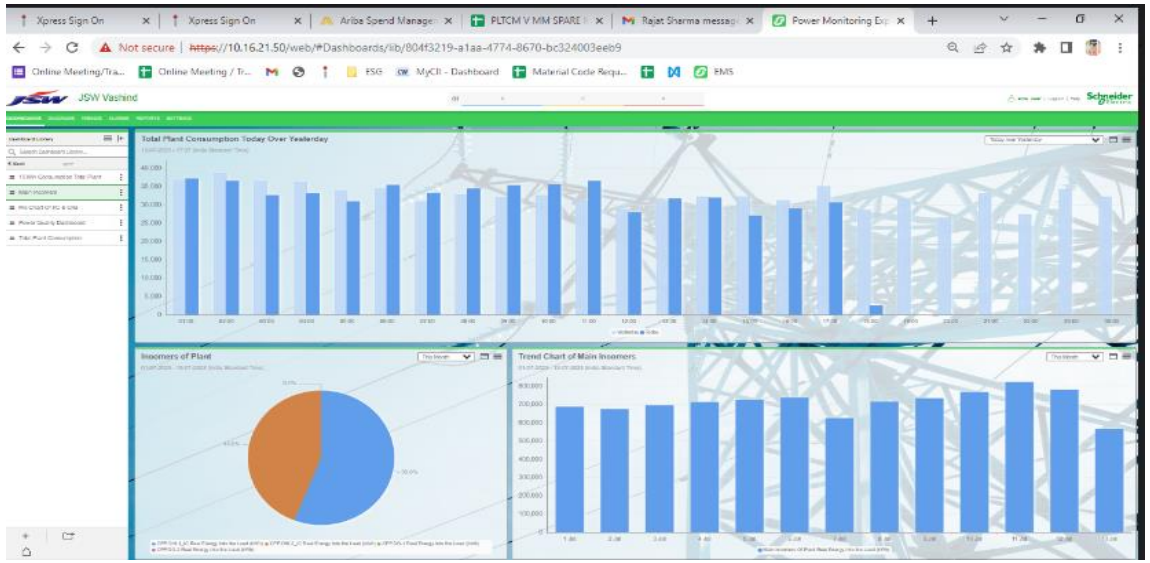
Monitoring of EnMS

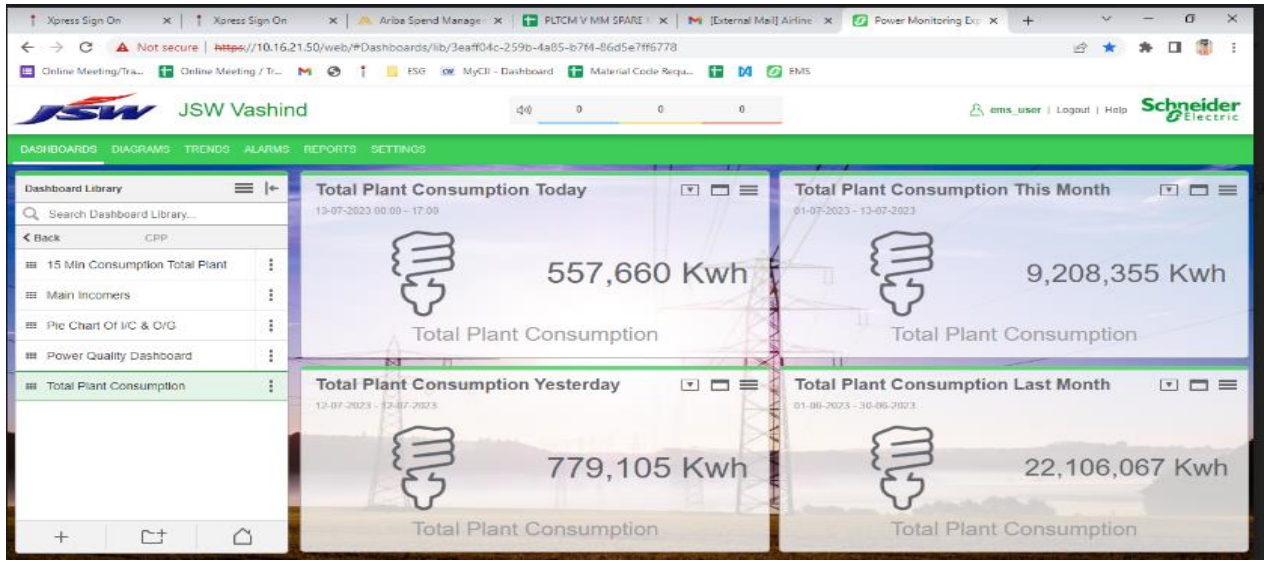


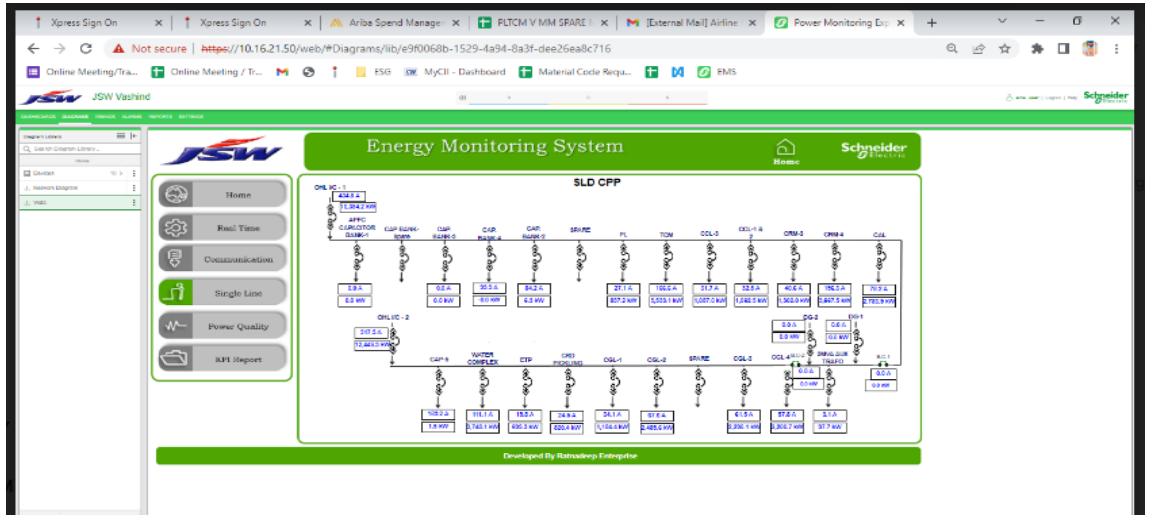
10. EMS and Other requirements

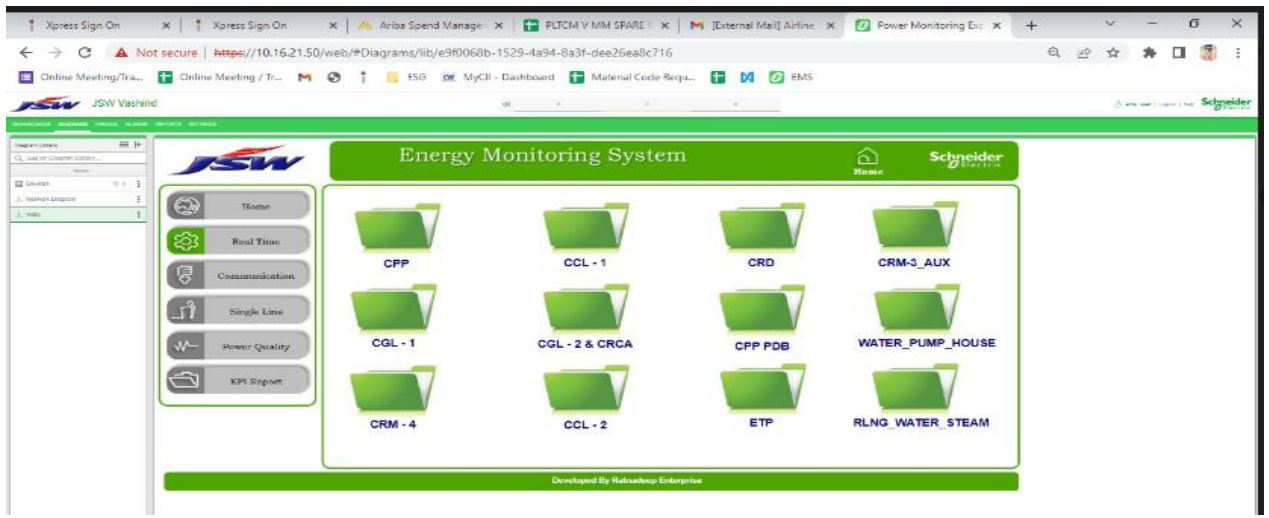
Energy Monitoring System

Confederation of Indian Industry







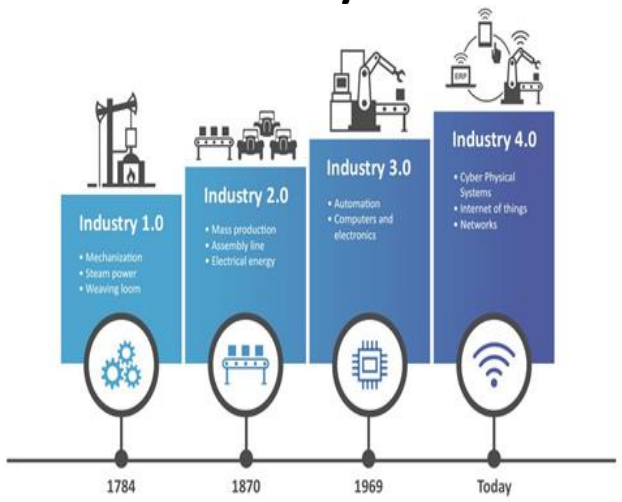


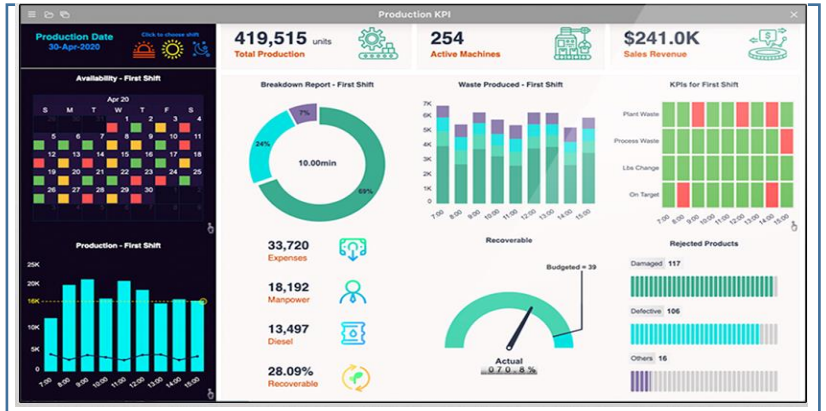
11. Digitization & Industry 4.0

CURRENT STATE

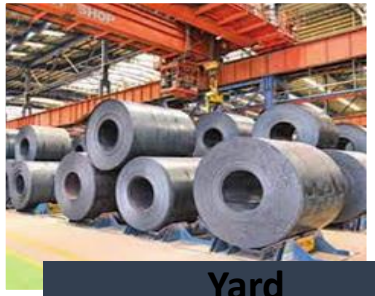
Confederation of Indian Industry

Industry 4.0



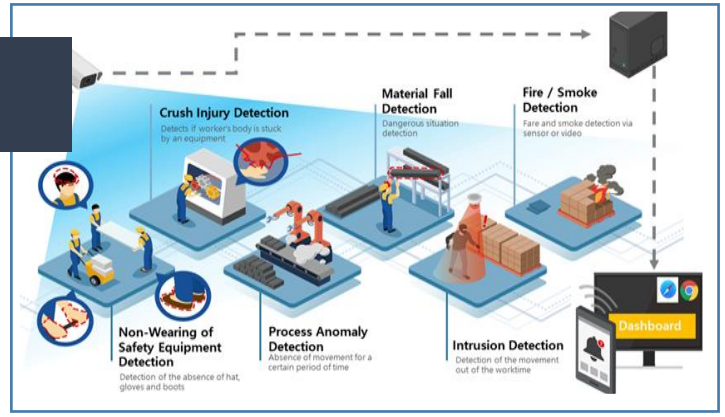


Dash Board

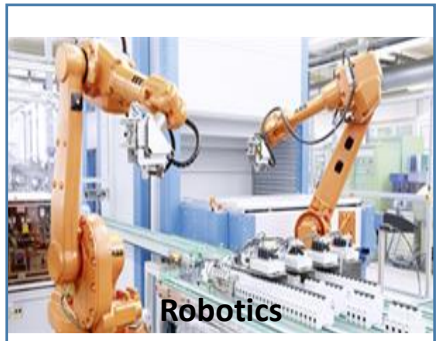


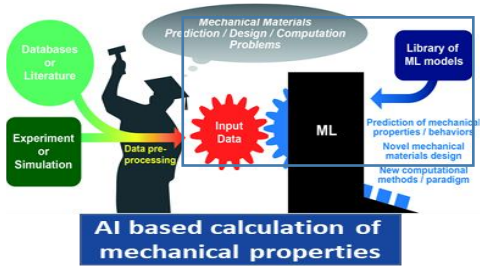
Yard Management

Logistics



AI based Safety

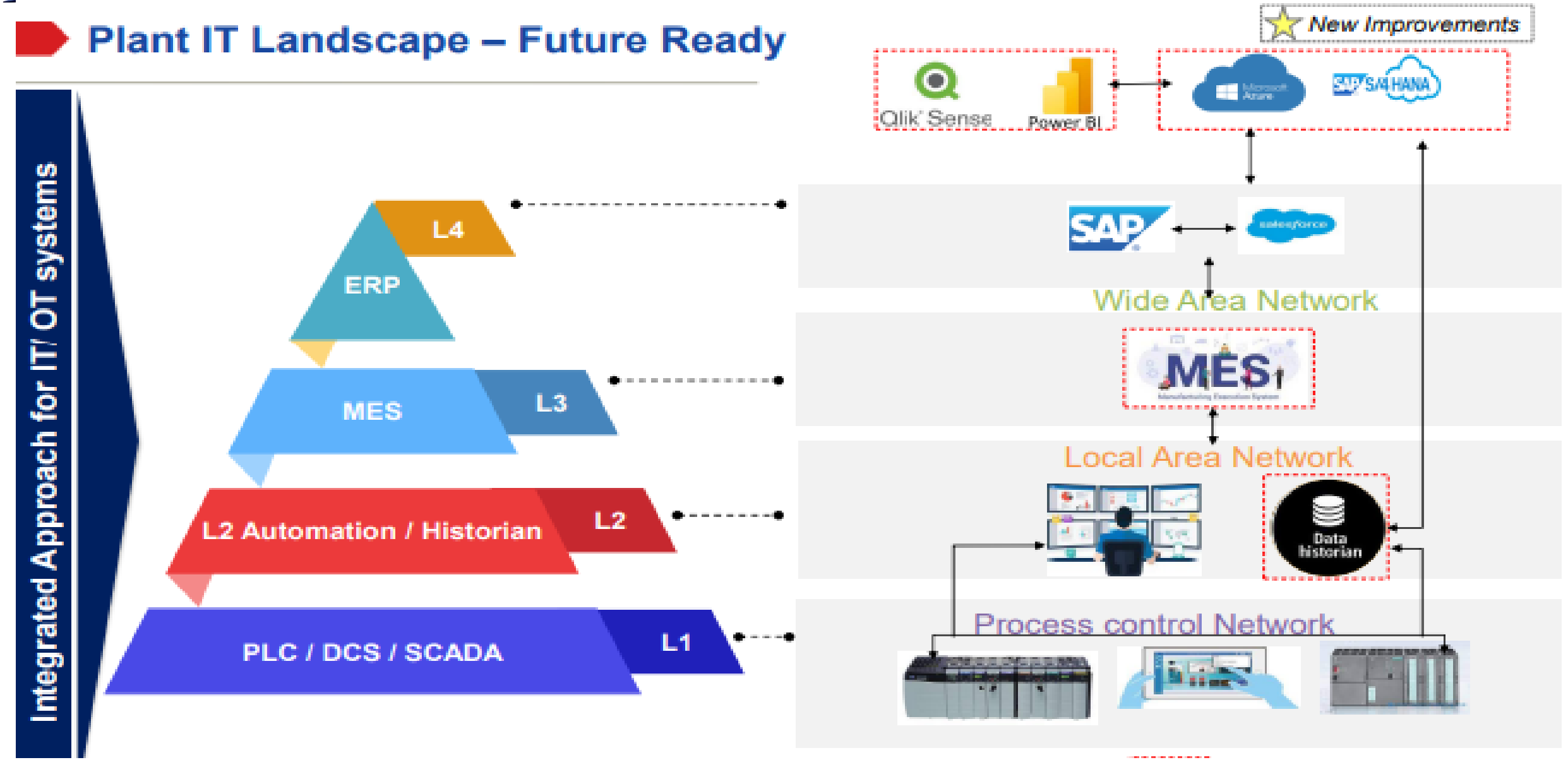




Predictive Maintenance

11. Digitization & Industry 4.0

Plant IT Landscape – Future Ready



11. Digitization & Industry 4.0

Digitalization Road Map 2023 - 2027: VASIND					
	2023	2024	2025	2026	2027
Manufacturing	IOT based Predictive Maintenance				
		Compressed Air Optimisation			
		Robotics - Dross removal & Sleeve loading			
		Process optimisation using Big Data/ AI ML (Process Data Historian and OI Platform for Data Visualization and Analytics)			
		Roll Shop Management			
PPC	APS - Advance Planning and Scheduling Algorithm				
	MES				
		ICT - Dash board			
Logistics	YMS				
		Logistics Sampark project - (Inboud/ Outbound / Truck inenting/ Gate Entry			
Finance		Inventory - digital monitoring and optimization			
		EC Dashboard		Costing Automation	
				Profitability Analysis Dashboard	
Safety		AI enable Safety & Security - Shark Project			
			Visitor and Employee - Gate Management		
Quality		Surface inspection system (SIS) - CAL & CCL 2			
	DFT measurement at CCL 2				
HR			Contractor Management system		
			Online Skill and Competency Mapping system		
		Training and employee management			

12. Stake Holder Involvement

Confederation of Indian Industry

Stake Holders	Initiatives
Employee	Energy Awareness, Paper less Invoicing, e-NFA,
Customer	Awareness, product catalogue, CCMS Customer Audit , Desk top Audit , Google meetings
Supplier	ARIBA, EnMS –ISO 50001, Energy Efficient procurment
Society	Awareness – Skit, Training

LED CONVERSION - CSR			
Impact	**Quantity**	**Power Consumption**	**Saving**
BEFORE	Total HPSV Lights Installed 1800 Nos.	173 kW	Power Saving 4.54 Lacs kWh / Annum Potential saving Rs.26.37 Lacs/Annum
AFTER	Installed LED Lights 958 Nos.	84 kW	

12. Stake Holder Involvement – Society & Supplier

Confederation of Indian Industry

Energy Awareness among society






Energy/Sustainability initiatives Supplier




Dec, 2020 (Zoom call – 7 contractor)
Dec, 2022 (Approx 50 major vendors

12. Stake Holder Involvement – Employee

Confederation of Indian Industry

Energy awareness

Energy week Celebration

Energy week Celebration

Energy Conservation Skit

Energy Exhibition

Energy Quiz

Recognition

CII National Award for Excellence in Energy Management 2023

13. Beyond Steel : Awards & Certification

Confederation of Indian Industry

FY	Name of Award	Location	year	Awarded by
FY24	Jamnanlal Bajaj for Fair Business Practices highest recognition as "TROPHY" for Coated	VTK	May, 2023	CFBP
FY23	Vasind Team secured Third Position in 17th State Level Energy Conservation and Management Award (MEDA) in the category of Metal and Steel Sector.	Vasind	Dec'22	MEDA
FY23	2 Teams won "Par Excellence", 2 Excellence, in National Convention On Quality Concepts (NCQC - 2022) held at Aurangabad. There were about 2200 Teams from all over India.	Vasind	Dec'22	QCFI
FY23	23rd National Energy Award for Excellence in Energy Efficient 2022- Vasind has been recognized as "Excellent Energy Efficient Unit"	Vasind	Sept, 2022	CII, Hyderabad
FY23	Gold Medal in India Green Manufacturing Challenge 2021-22 & 1st Runner Up IGMC Apex Award.	Vasind	April, 2022	IRIM , Chennai
FY23	**Platinum Award - Apex India Green Leaf Award 2021 for Energy Efficiency**	Vasind	April, 2022	Apex India Foundation, Delhi

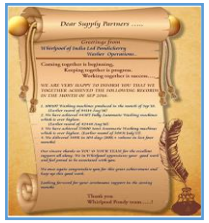
CII National Award for Excellence in Energy Management 2023

13. Beyond Steel : Any other relevant information

Confederation of Indian Industry

OTHER QUALITY AWARDS	Received
Received 2nd Runner-up award for CII National Energy Efficiency Circle Competition 2023	July-23
Received "Gold" position for SEEMs National Energy management 2022	Sept-23
Received "Best Supplier" award for 2019 from M/s Haier Appliances, Pune	Jan_2020
Samsung has awarded JSWSCPL for Excellence in recognition of "Best Support" for Quantity Supplied during 2019	Dec'19
JSWSCPL, Kalmeshwar unit has Participated in 33rd National Convention on Quality Concepts (NCQC-2019) in December 2019 held at (IIT BHU) Varanasi (Total 8 Teams participated)	Dec-19
JSWSCPL, Vasind unit has Participated in 33rd National Convention on Quality Concepts (NCQC-2019) in December 2019 held at (IIT BHU) Varanasi (Total Two Teams participated)	Dec-19
JSWSCPL, Kalmeshwar unit has participated in Chapter Convention on Quality Concept (CCQC) -2019 Cojmpetition at Nagpur. Won Two Teams Super Gold, Four Team Gold & Two Silver Medal & 3rd Prize in Propagation award	Oct'19
JSWSCPL, Vasind unit has participated in Chapter Convention on Quality Concept	Sep-19

Customer Appreciation



Letter of Appreciation WHIRLPOOL

Best Vendor Award SAMSUNG

Star Performer HAIER

Best Contribution Partner SAMSUNG

K3 Certificate for GL, PPGI , PPGL Validity – Nov 2021

Best Vendor Award IFB

What we Earn is not important,
but what we Save is most important…

Conserve Energy ..!!!!! Save Earth…..!!!

Thank You