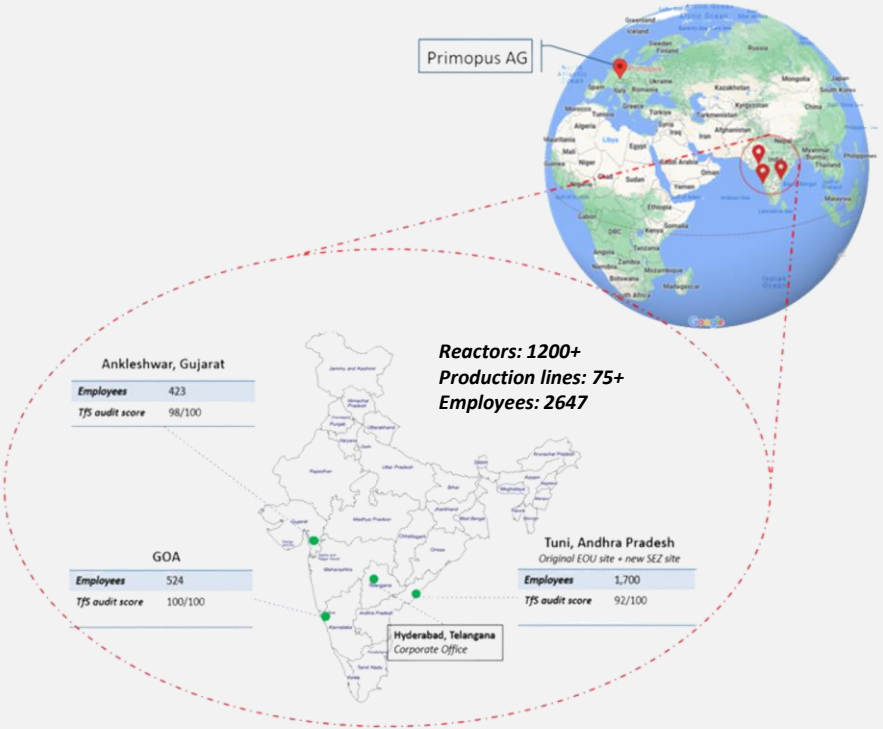
PRESENTERS:

- **Mr. Parag Shah,** Site Head, Ankleshwar
- **Mr. Chetan Pandya,** Head-Utilities, Ankleshwar
- **Mr. Pawan Singh,** Manager- Reliability & Project Quality, Ankleshwar

Deccan overview

- Private limited company, started its operation in the year 2008.
- We are in field of manufacturing of Agrochemicals and Advance Intermediates products.
- Ankleshwar site is an ISO 9001:2015, 14001:2015,26000:2010(SR10) 45001:2018, 50001:2018, TFS & 5S certified as well as Responsible Care logo holding company.
- TFS last audit score was 99%



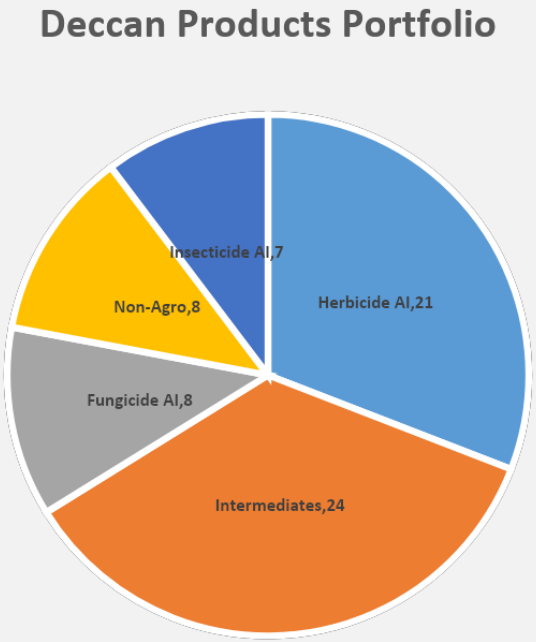
Deccan Products

Business Model:

1. Work only with innovator R&D based companies.
2. Deccan is the world's number 1 Custom Manufacturer for Agrochemical.
3. Deccan is the 2nd largest exporter of Agrochemicals out of India.
4. Exclusive focus on Custom Manufacturing – we do not have any product of our own.
5. One product-One customer – Deccan makes every product exclusively for a specific customer and never sells the same product to any other customer.

Sustainability & Energy Management:

1. Working with Ernst & Young to prepare our baseline CO2 and water assessment and will follow up with annual sustainability report
2. Sharp focus and major actions taken to reduce carbon footprint for energy that we use.



Deccan Timeline

2008
Deccan formed and started construction of its first production site in Tuni

2010
Started commercial production at its first production site in Tuni

2014
Acquired 2nd production site in Ankleshwar (Gujarat) from Bayer CropSciences in June 2014

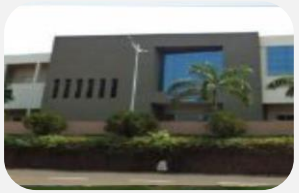
2016
Acquired 3rd production site in Goa from Syngenta in June 2016

2018
Started construction of 4th production site (Tuni SEZ)

2021
Started commercial production at 4th production site


SITE 1 : TUNI EOU


SITE 2 : ANKLESHWAR


SITE 3 : GOA


SITE 4 : TUNI SEZ

Deccan Fact Sheet

Ankleshwar Site

- *Present demand power is 12 MW. From July 2023, we switched over 50% of the power requirement on Hybrid Power (Wind + Solar) to decrease our Carbon footprint, and will be availed 100% of our total demand by June 2025.*
- *Deccan does not incinerate organic waste residues on site. We send it to cement companies to use as a fuel.*
- *Incineration of organic waste at very high temperature cement kilns with high residence times has the lowest NOx and SOx emissions and also reduces usage of fossil fuel.*

Tuni Site

- *Significantly improved Cycle Thermal Efficiency from 36% to 65% after installation of the combined cycle power plant (Electricity + Steam); reducing coal usage.*
- *Reduced our Coal usage, CO2 and SO2 emissions by 32% using the combined cycle power/steam plant.*
- *Boiler is designed to use up to 20% biomass (rice husk) as fuel. Ash from boiler is used for making building bricks on site.*
- *Using of air cooled condensers in power plant so as to reduce water usage.*
- *Tuni site uses sea water and desalination plants to support 100% of the site water needs. Deccan's desalination plants help reduce the stress levels on fresh water availability to our production site and let them use all available fresh water to serve human, animal and agricultural needs.*

Goa Site

- *In the process of installing 0.8 mw of Solar power generation on site.*
- *Commissioned a carbon neutral boiler which uses agricultural waste left over (Corn cobbs, Groundnut shells, Soya husk etc.) to generate steam.*
- *Discontinued use of furnace oil for generation of steam at Goa, reducing Carbon footprint for steam generation at Goa by 75%.*

Technology/Specification of Major section

Hydrogenation

Bromination

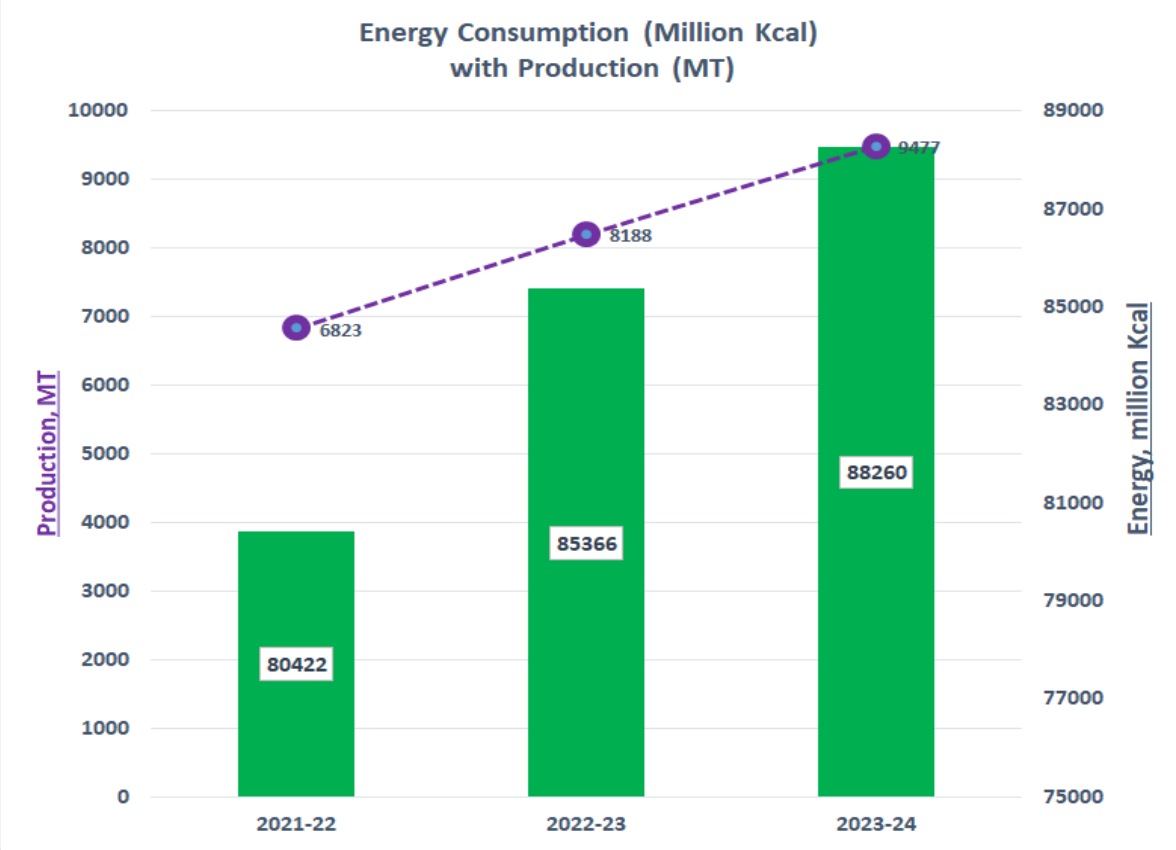
Nitration

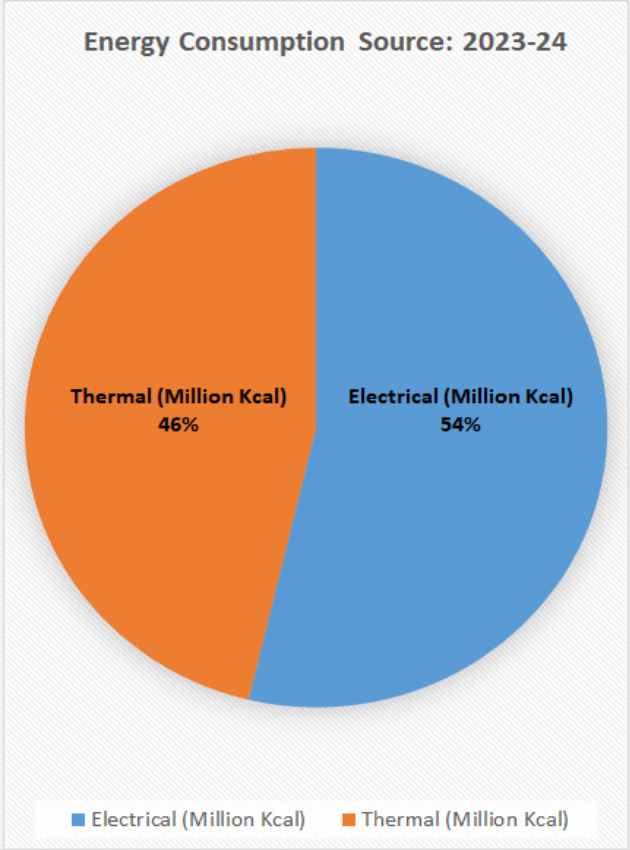
Chlorination

Energy Efficient Motors, Dry vacuum pumps, Helix dryer, Nauta dryer, Screw Compressor, condensate recovery system, DCS based operation system.

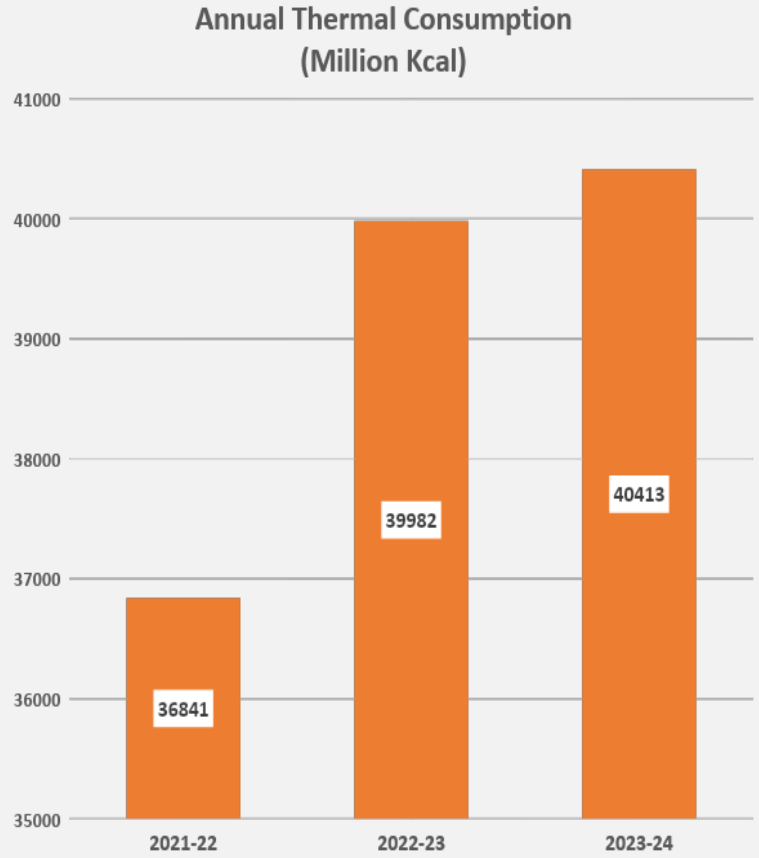
Site Recognitions - Accreditations

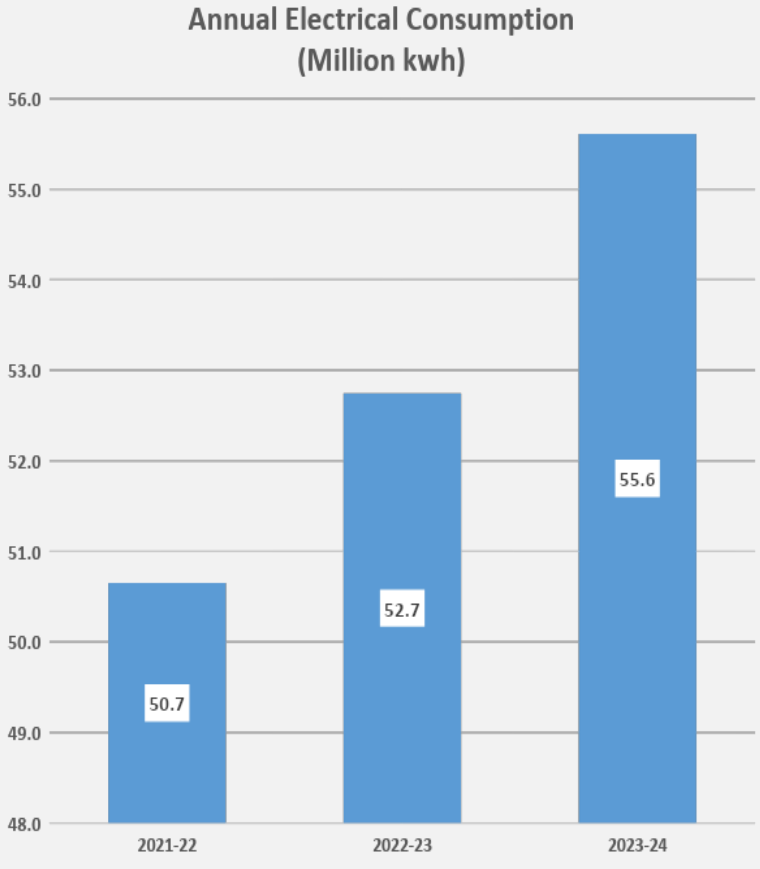
Energy Consumption – Overall Energy & Production



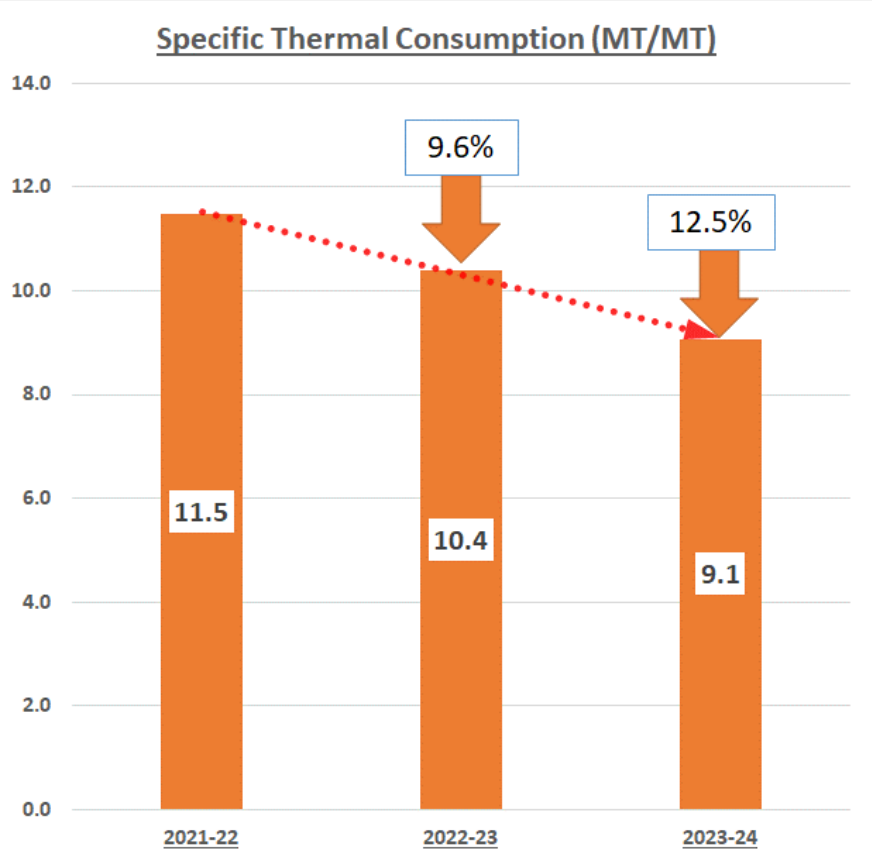


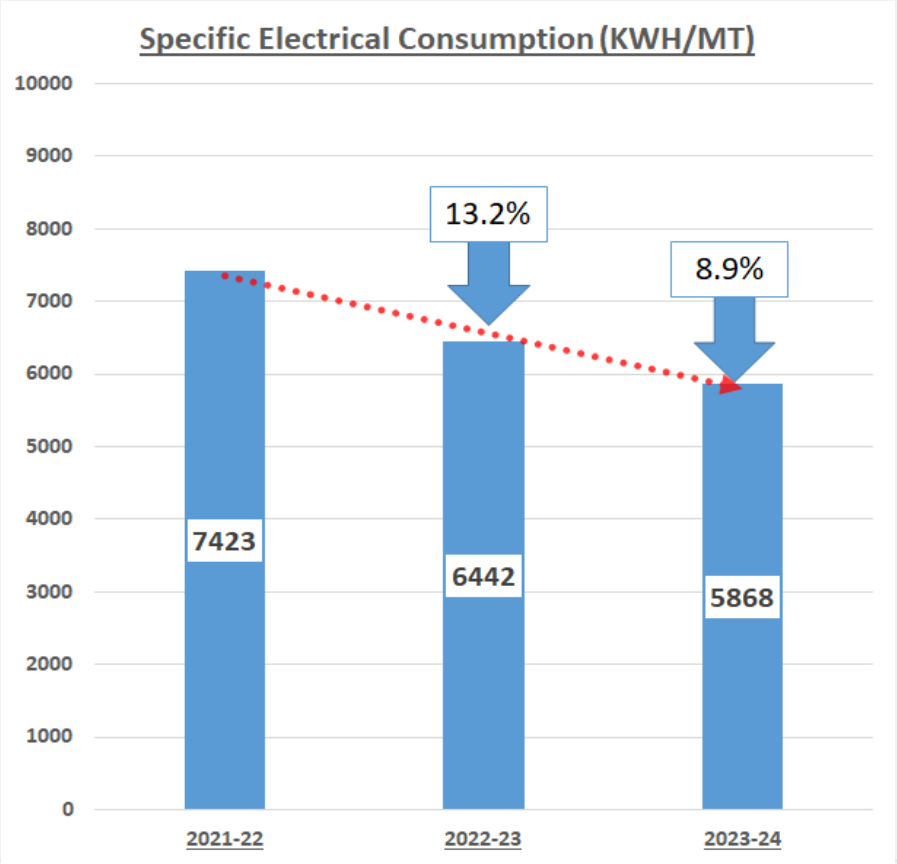
Energy Consumption - Annual Electrical & Thermal Energy



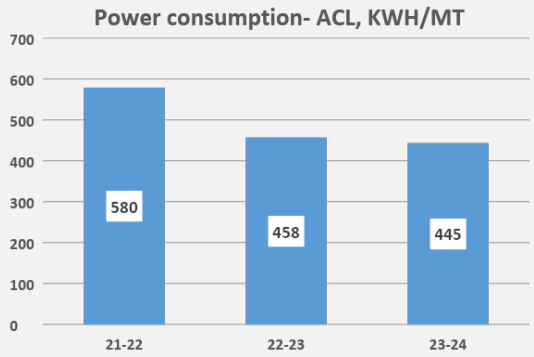


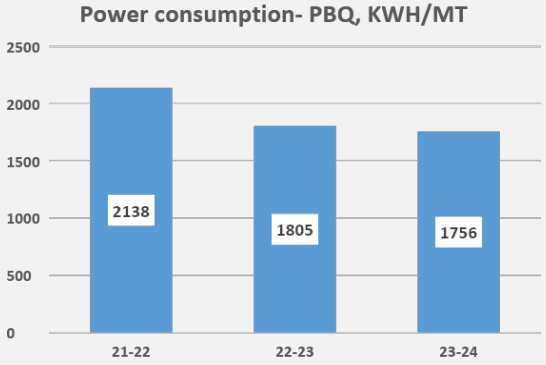
Energy Consumption – Specific Energy

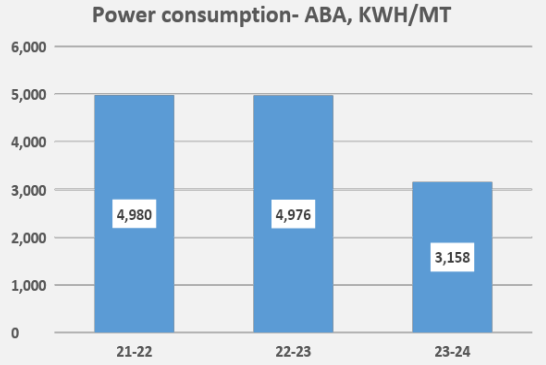


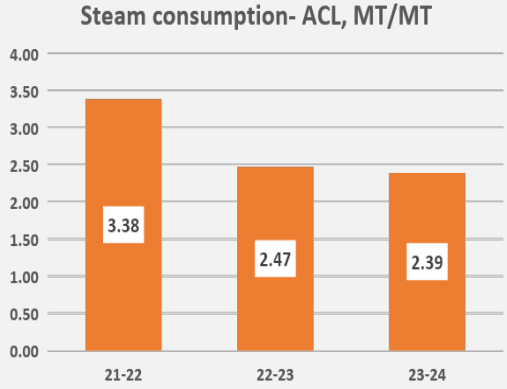


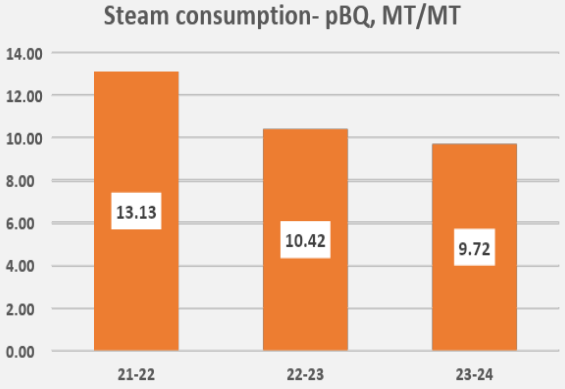
Product Wise Specific Energy Consumptions

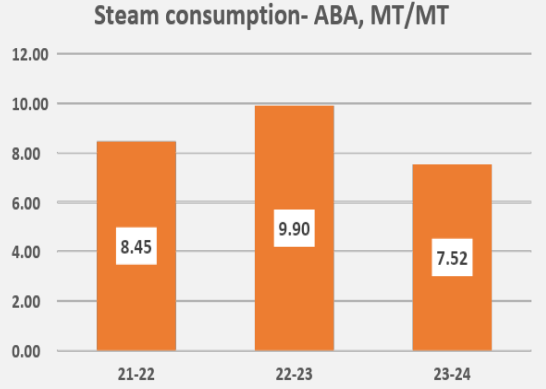






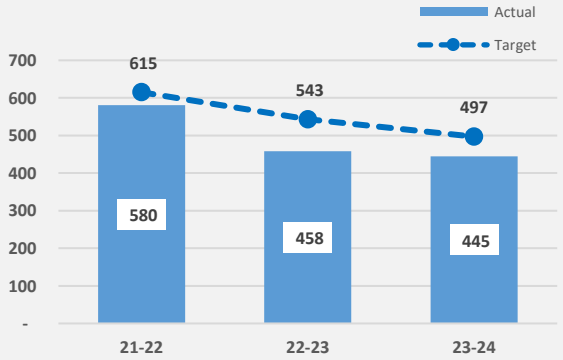




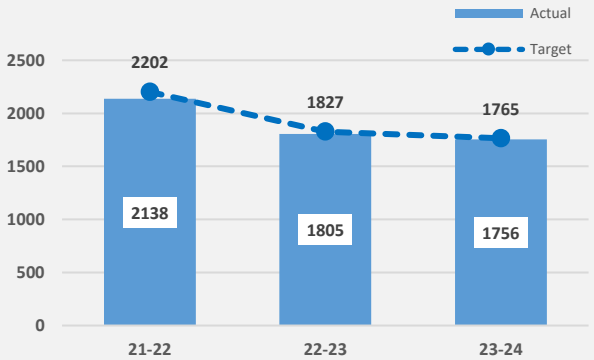


Internal Benchmarking - Product wise specific Energy Consumptions

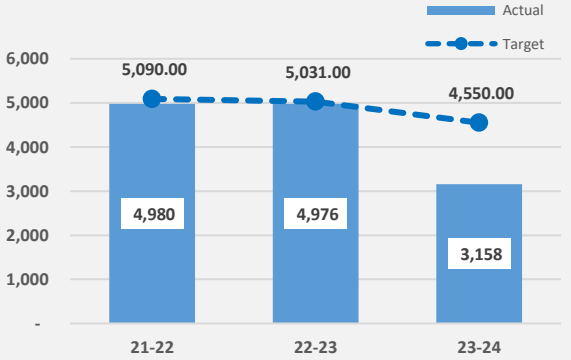
Power consumption- ACL, KWH/MT



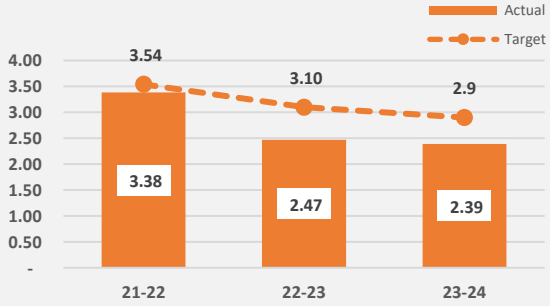
Power consumption- PBQ, KWH/MT



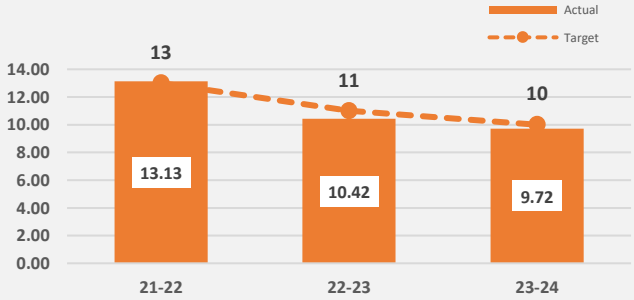
Power consumption- ABA, KWH/MT



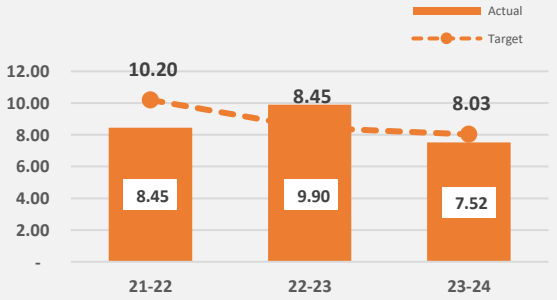
Steam consumption- ACL, MT/MT



Steam consumption- pBQ, MT/MT



Steam consumption- ABA, MT/MT



Major Encon Projects Planned in 2024 - 25

Sr. No.	Title of Project	Annual Electrical Saving (Million Kwh)	Annual Thermal Saving (Million Kcal)	Investment (Rs in Million)	Payback Period
1	Reduction in specific steam consumption (Kg/MT) by 1.5 % in DS38 process by replacing of steam trap based on flow controlling through pumping trap.	-	16	0.25	8 months
2	Reduction in N2 consumption in AC-2 plant by installation of PRV & BPRV systems for nitrogen blanketing	0.10	-	0.18	12 Month
3	Reduction in power consumption by replaced Cooling tower FRP fan to E-glass epoxy FRP fan in AC2 Plant.	0.04	-	0.2	6 month
4	Reduction in power consumption of air compressors by installation of pressure switch on surge tank of PSA plant in EB-02	0.11	-	0.1	1 month
5	Reduction in steam consumption in Calendria by re-routing of steam inlet line.	-	338	0.15	1 Month
6	Reduction in power consumption of air cooled chiller by applying mist cooling system in condenser coils.	0.23	-	0.3	2 month
7	Steam Condensate recovery to be improve from 41% to 50%	-	132	0.5	6 month
TOTAL PROJECT : 07		**0.48**	**486**	**1.68**	-

Encon Projects Implemented : 2021 - 22

Energy Conservation Programme				
Description of Energy Conservation Programme	**Reduction in power consumption by replaced Cooling tower FRP fan to E-glass epoxy FRP fan (Changed in 08 Nos. of CT fans) in Central Energies & AC5 Plant.**			
Plan	**15.01.2021**	**Plan completion**	**03.03.2021**	**Energy saving project no.: DFC/ENR/21-09**
Actual	**17.04.2021**	**Actual Completion**	**18.06.2021**	
Team Leader : Chetan Pandya	**Team Members : Navnit Raiyani, Mayank Kher, Pragnesh Upadhyay, Dipak Parmar, Hiren Patel.**			

Picture/Data before Programme (if available)	Picture/Data after Programme
 **MOC : FRP fan blades**	 MOC: E-Glass Epoxy fan blades

Technical Evaluation	Electricity KWH	Steam Kg
A. Energy consumption/day - before implementation	1584	
B. Energy consumption/day - after implementation	1188	
D. Energy saving (A-B) Per day	396	
C. Energy saving (A-B) Per annum= D X (campaign running days or 350 days)	138600	
E. Energy saving in (Rs/year)	1203048	
F. Other cost saving (Rs/Year)	0	
G. Total Cost saving (E+F) in (Rs/year)	1203048	
H.Proposed investment (Rs.)	1475600	
I.Payback period (Month)	15	
TOTAL COST SAVINGS FROM PROJECT (Rs/Yr)		

Inference :Reduction In power consumption by replacing MOC of fan blade of cooling tower located in central energies & AC-5, earlier it was FRP fan blade which was replced with E glass epoxy fan blade. Hence, power consumption reduce up to 2.06 (Avg.) kw/hr in each fan among total 8 Nos. of fan. Total power saving was 2.06*8*24*350=1,38,600 KWH.

Encon Projects Implemented : 2022 – 23

Energy Conservation Programme				
Description of Energy Conservation Programme	**Reduction in power consumption by Air-Nitrogen leakages monitoring survey.**			
Plan start date	**03.04.2021**	**Plan completion**	**31.08.2021**	**Energy saving project no.: DFC/ENR/22-14**
Actual start date	**01.09.2021**	**Actual Completion**	**31.03.2023**	
Team Leader : Chetan pandya		**Team Members : Pavan singh, Navnit Raiyani, Mrugesh Trivedi, Mayank Kher.**		
Picture/Data before Programme (if available)		**Picture/Data after Programme**		
				

Technical Evaluation	**Electricity KWH**	**Steam Kg**
A. Energy consumption/day - before implementation	21707.13	
B. Energy consumption/day - after implementation	20101.27	
D. Energy saving (A-B) Per day	1605.86	
C. Energy saving (A-B) Per annum= D X (campaign running days or 350 days)	578109	
E. Energy saving in (Rs/year)	5145197	
F. Other cost saving (Rs/Year)	0	
G. Total Cost saving (E+F) in (Rs/year)	5145197	
H.Proposed investment (Rs.)	275000	
I.Payback period (Month)	1	
TOTAL COST SAVINGS FROM PROJECT (Rs/Yr)	**5145197**	

Inference : Reduction in power consumption by monitoring survey of air & nitrogen leakage, after arresting leakages total saving of power was found 48,176 KWH/month. Hence total power saving achieved is 48,176*12*8.9 Rs.= 51,45,197 Rs./Year.

Encon Projects Implemented : 2023 - 24

Energy Conservation Programme				
Description of Energy Conservation Programme	Power reduction in PSA compressor by installation of Pressure switch on surge tank outlet for cut-off PSA.			
Plan start	10.07.2023	Plan completion	12.09.2023	Energy saving project no.:DFC/ENR/23-03
Actual	19.10.2023	Actual Completion	27.10.2023	
Team Leader : Chetan Pandya		Team Members : Hardik Shah, Pawan Singh, Sohel Shaikh, Mrugesh Trivedi,		

Picture/Data before Programme (if available)	Picture/Data after Programme
	

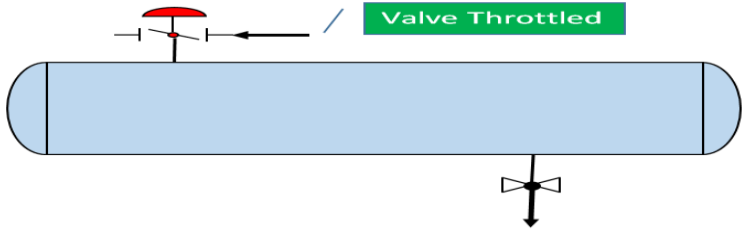
Technical Evaluation	Electricity KWH	Steam Kg
A. Energy consumption/day - before implementation	20588	
B. Energy consumption/day - after implementation	19665	
C. Energy saving (A-B) Per day	923	
D. Energy saving (A-B) Per annum= C X (campaign running days or 350 days)	323050	
E. Energy saving in (Rs/year)	3068975	
F. Other cost saving (Rs/Year)	0	
G. Total Cost saving (E+F) in (Rs/year)	3068975	
H.Proposed investment (Rs.)	60000	
I.Payback period (Month)	1	
TOTAL COST SAVINGS FROM PROJECT (Rs/Yr)	**3068975**	

Inference : Applied individual pressure switch at outlet of 04 nos. surge tank for cut off PSA on 27th Oct-23. Before PSA was not cut-off after received 5.5Kg/cm2 in main header, PSA was running contineously in vent mode. After installation of Pressure switch on outlet of surge tank, PSA cut-off on 5.5Kg/cm2. Hence now PSA compressor is going on unload condition. So power saving achived 922KW/day. Anual Saving is approx Rs. 30 Lacs.

Encon Projects Implemented : 2023 - 24

Energy Conservation Programme

Description of Energy Conservation Programme		10% Power Reduction by (-28°C) & (-15°C) brine return valve of reactor JKT throttle up to 60 % to increase ΔT.		
Plan start date	03.07.2023	Plan completion	10.09.2023	Energy saving project no.:DFC/ENR/23-19
Actual start date	01.10.2023	Actual Completion	13.10.2023	
Team Leader : Hiren Patel		Team Members : Ashvin Varde, Vishal panchal, Piyush Lad, Piyush Patel		

Picture/Data before Programme (if available)	Picture/Data after Programme
	

Technical Evaluation	Electricity KWH	Steam Kg
A. Energy consumption/day - before implementation	1281	
B. Energy consumption/day - after implementation	1159	
D. Energy saving (A-B) Per day	122	
C. Energy saving (A-B) Per annum= D X (campaign running days or 350 days)	42700	
E. Energy saving in (Rs/year)	417606	
F. Other cost saving (Rs/Year)	0	
G. Total Cost saving (E+F) in (Rs/year)	417606	
H.Proposed investment (Rs.)	0	
I.Payback period (Month)	0	
TOTAL COST SAVINGS FROM PROJECT (Rs/Yr)	417606	

Inference : After studying the vapor load & minimal flow required for condensing vs actual flow. The power consumption have been reduced by throttling of utility valve, Resultant 122 KWH/Day power consumption reduced. No impact in plant operation and reduced the utility power of plant.

Encon Projects Implemented : 2023 - 24

Energy Conservation Programme

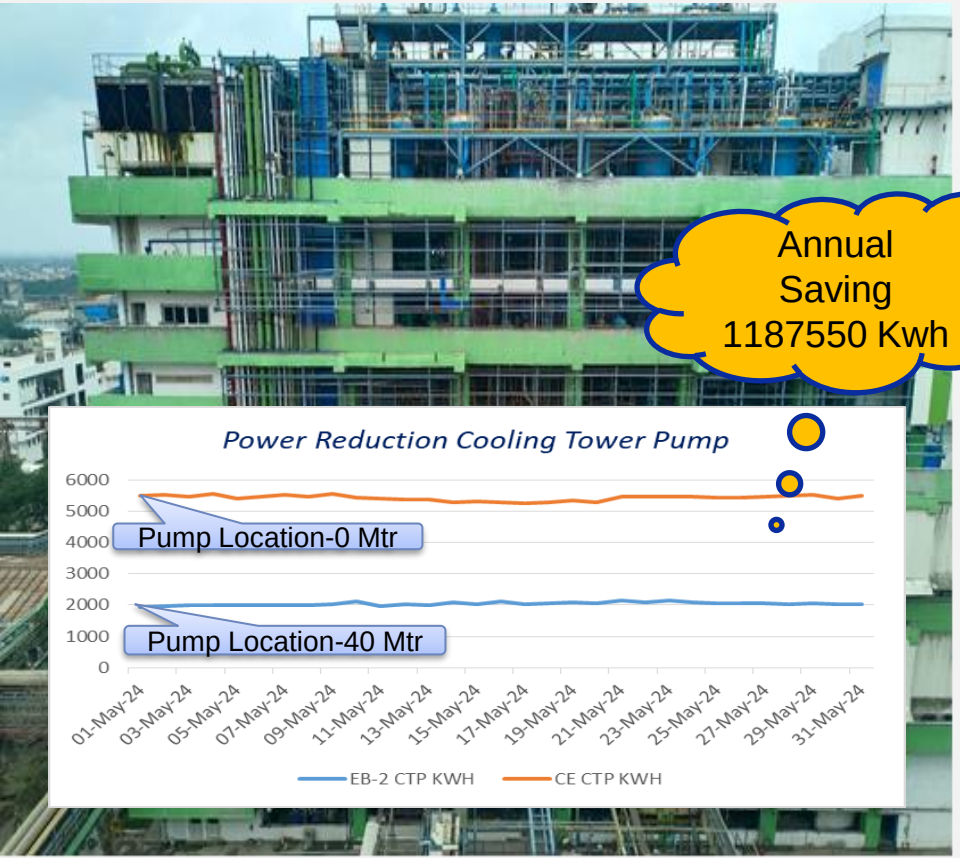
Description of Energy Conservation		Reduction In Power Consumption by optimization of Hot oil system		
Plan start date	10.05.2023	Plan completion	30.05.2023	Energy saving project no.: AC 2 / EnMS/2023/001
Actual start	15.06.2023	Actual Completion	25.08.2023	
Team Leader Mr. Paresh Patel		Team Members Mr. Jay Khalasi, Mr. Hardik Patel, All DCS officers and Shift in charge		

Picture/Data before Programme (if available)	Picture/Data after Programme
	

Technical Evaluation	Electricity KWH	Steam Kg
A. Energy consumption/day - before implementation	381	
B. Energy consumption/day - after implementation	340	
D. Energy saving (A-B) Per day	41	
C. Energy saving (A-B) Per annum= D X (campaign running days or 350 days)	14350	
E. Energy saving in (Rs/year)	140343	
F. Other cost saving (Rs/Year)	0	
G. Total Cost saving (E+F) in (Rs/year)	140343	
H.Proposed investment (Rs.)	60000	
I.Payback period (Month)	4	
TOTAL COST SAVINGS FROM PROJECT (Rs/Yr)	140343	

Inference :We are using Hot Oil skid for cracking reaction, for heating we are using electrical heater of 180 KW.
We have started to stop Hot Oil heater by decresing set point for heating as a result power consumption came down.
Later on Hot oil motor replaced with 20Hp motor instead of 15 HP.Power consumption reduced from 11422 to 10191 KWH Average per month.

Innovative Projects Implemented : 2023 - 24

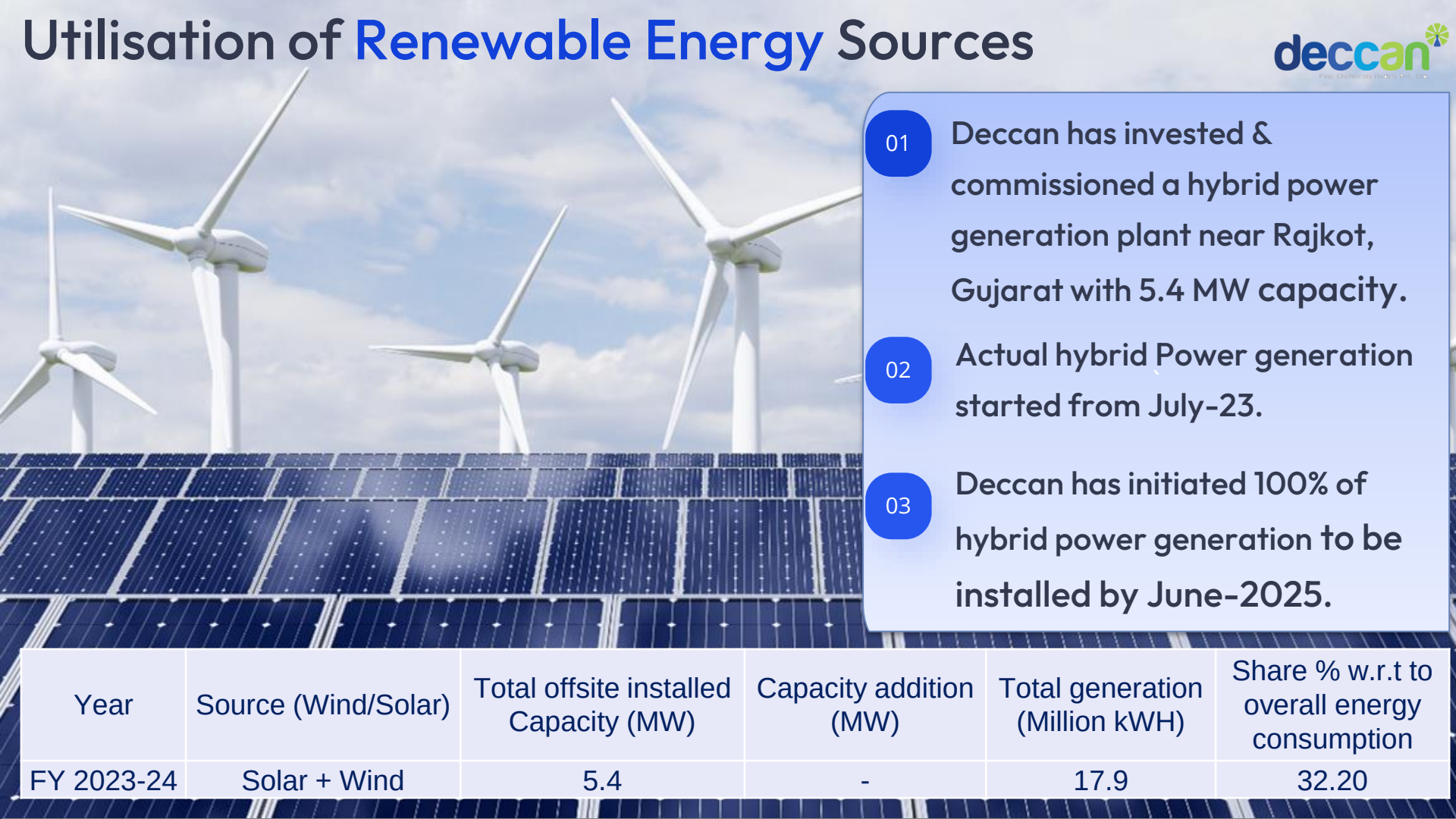


Reduction in power by installing cooling tower at higher elevation..

- We have central cooling tower with pump specs 220 M3/Hr flow and 50 M head with 55 KW motors. For required flow of 1100 M3/Hr, we need to run 5 pumps resultant Power consumption is very high.
- With this background, we decided to install at higher elevation resulting in pump specs as 550 M3/Hr flow and 15 M head with 55 KW motor. Avg. Power for '0' mtr was 5434 Kwh/Day while for 40 mtr is 2041 Kwh/Day. Diff. Is 3393 Kwh/Day.
- Initial cost is also less due to less nos. of required Pumps.

Annual saving is approx. 116 Lacs Rs. in power.

Utilisation of Renewable Energy Sources



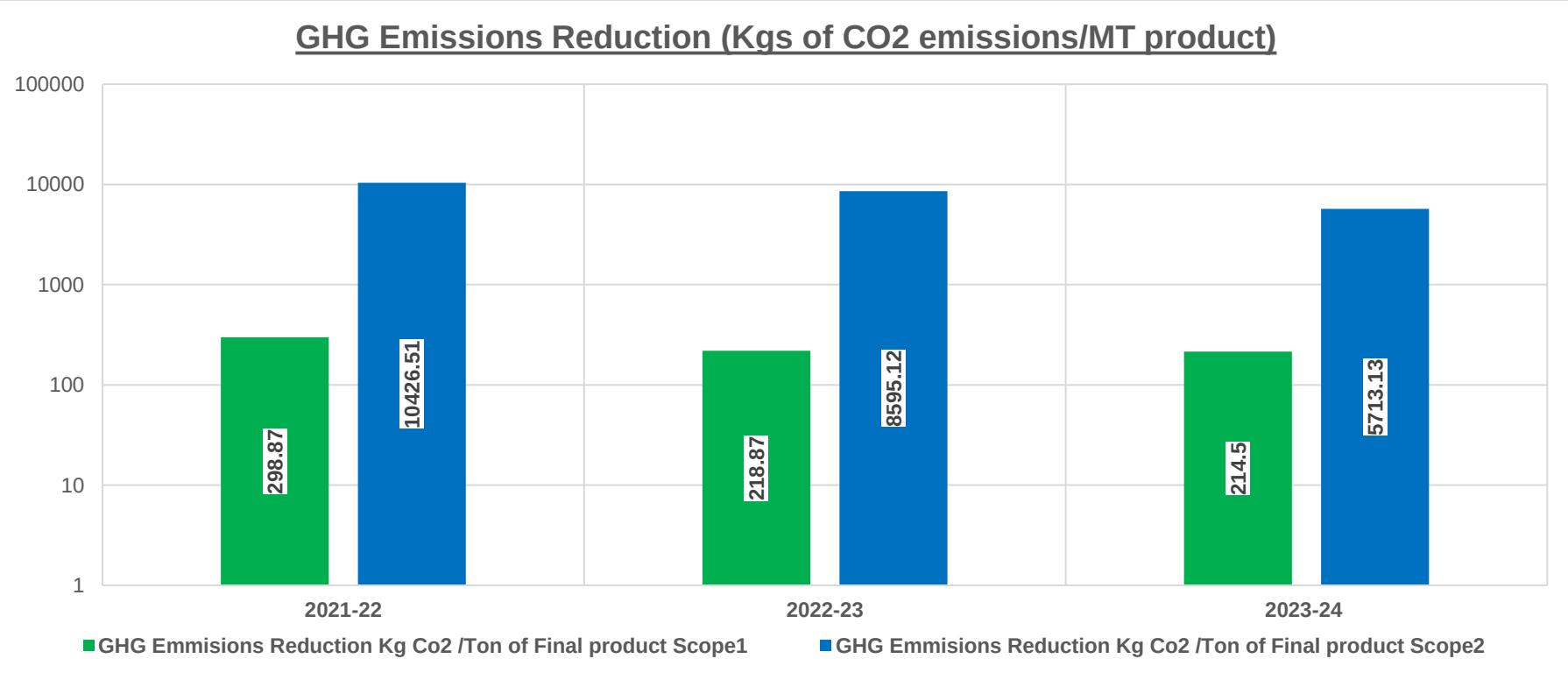
01 Deccan has invested & commissioned a hybrid power generation plant near Rajkot, Gujarat with 5.4 MW capacity.

02 Actual hybrid Power generation started from July-23.

03 Deccan has initiated 100% of hybrid power generation to be installed by June-2025.

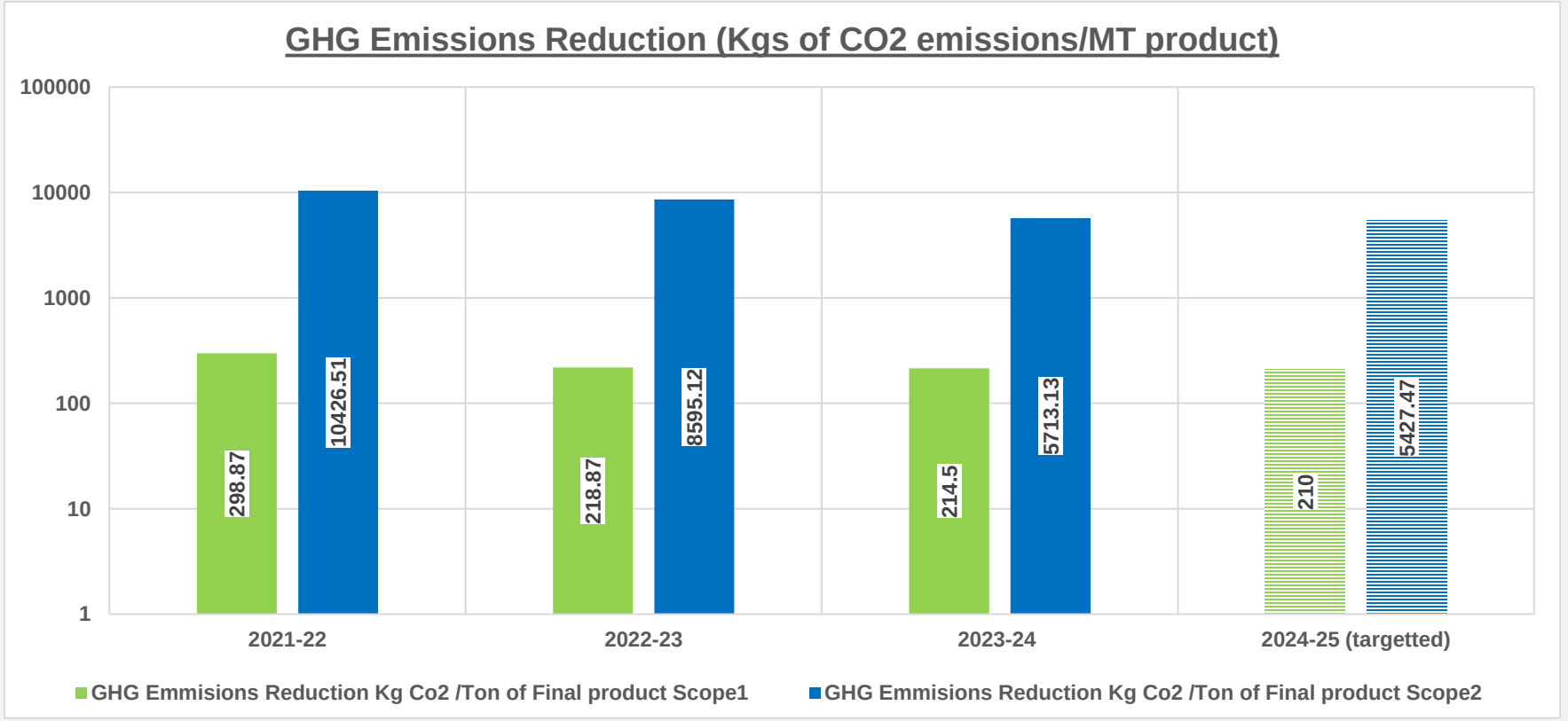
Year	Source (Wind/Solar)	Total offsite installed Capacity (MW)	Capacity addition (MW)	Total generation (Million kWH)	Share % w.r.t to overall energy consumption
FY 2023-24	Solar + Wind	5.4	-	17.9	32.20

GHG Inventarisation



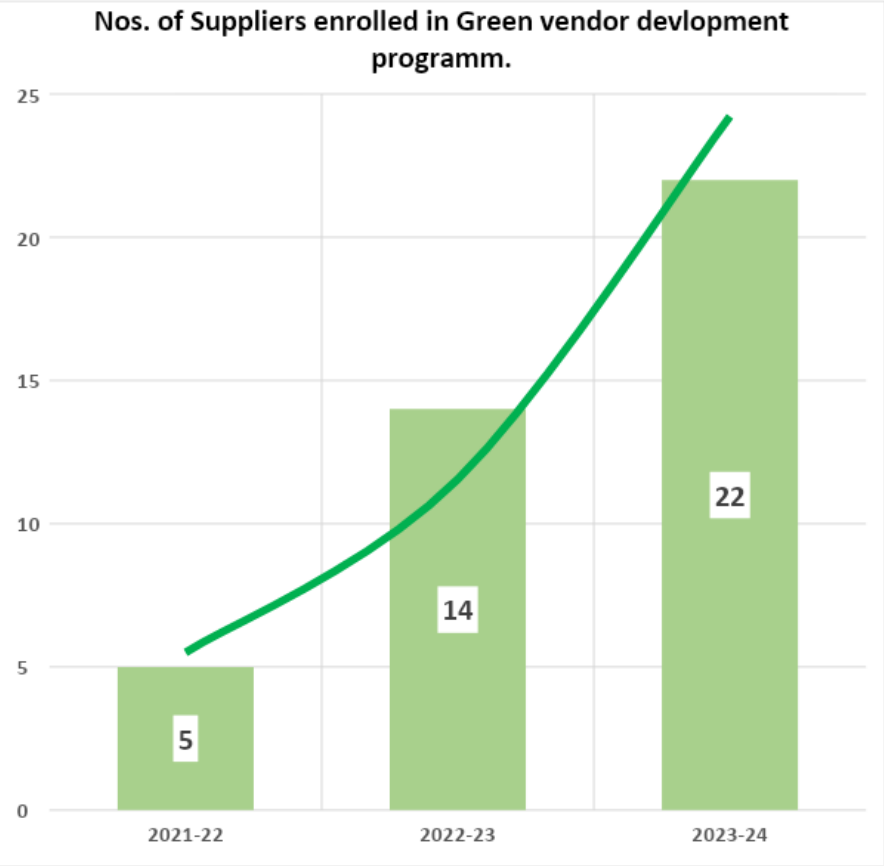
Deccan has committed to reduce its carbon emission up to 30% by 2025.

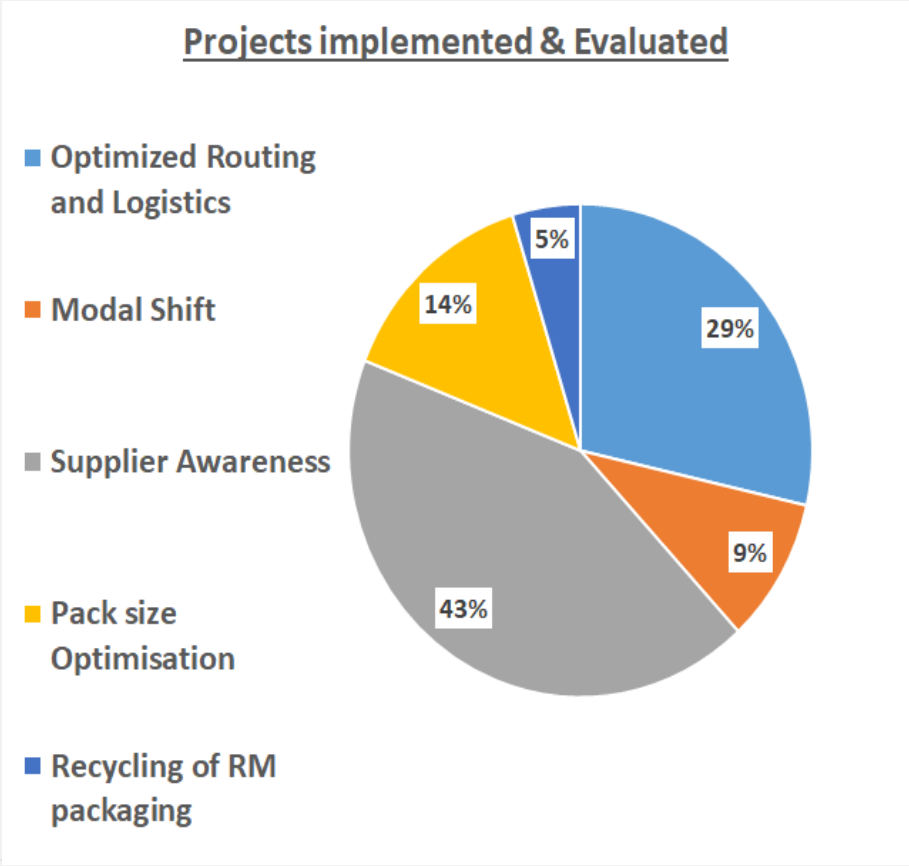
GHG Inventarisation



Scope 2 Carbon Emission kg CO2/Ton of final product is target to 5% reduction

Green Supply Chain Management





Green Supply Chain Management

Assessment and Goal Setting

- Conduct a comprehensive assessment of the current supply chain to identify environmental impacts, inefficiencies, and areas for improvement.
- Set clear and measurable sustainability goals, such as reducing carbon emissions, minimizing waste, and promoting eco-friendly practices.

Supplier Engagement and Selection

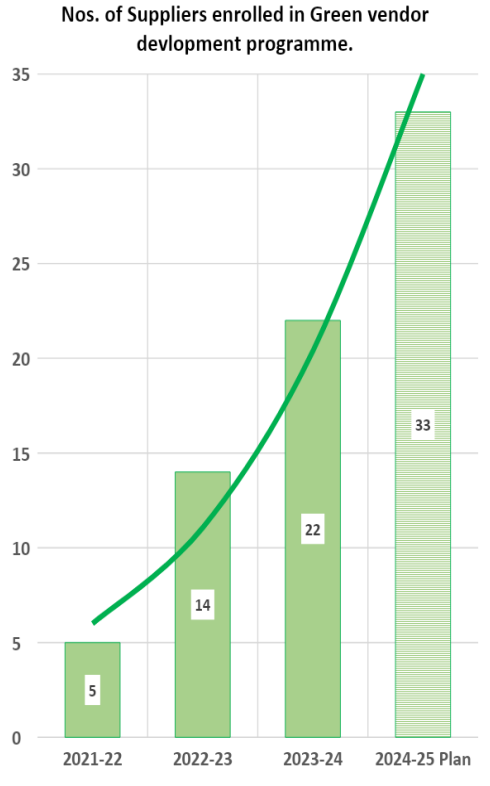
- Prioritize suppliers with strong environmental and ethical practices, ensuring they align with your sustainability goals.
- Develop supplier guidelines that emphasize sustainable sourcing, waste reduction, and energy efficiency.
- Collaborate with suppliers to find innovative ways to reduce the environmental impact of their processes and products.

Logistics and Transportation

- Opt for low-impact transportation methods, such as using electric or hybrid vehicles, and prioritize rail or sea freight over air freight.
- Consolidate shipments and use route optimization software to reduce transportation-related emissions.

Employee Training and Awareness

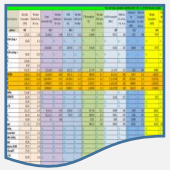
- Train employees at all levels about the importance of sustainability in the supply chain and how their actions contribute to the broader goals.
- Promote a culture of environmental responsibility by encouraging employees to suggest and implement green initiatives.



Teamwork, Employee Involvement & Monitoring

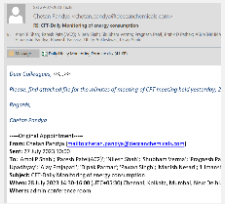
DAILY REPORTS & ANALYSIS

DAILY MONITORING SYSTEM



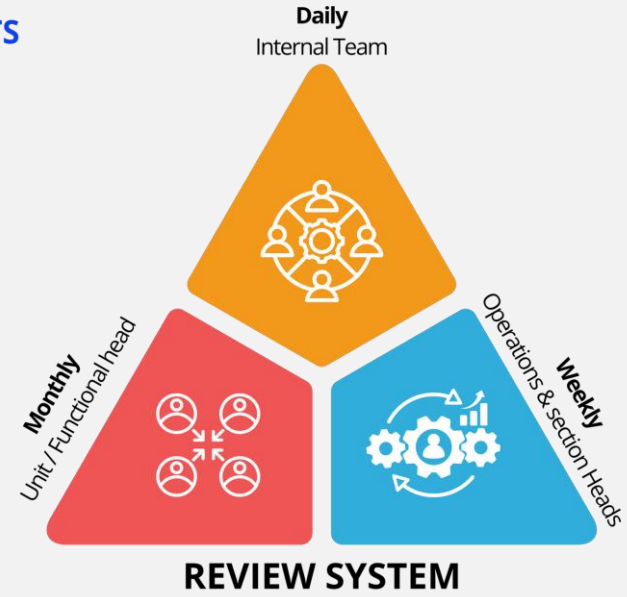
DEVIATION ANALYSIS & CAPA

REVIEW MEETINGS



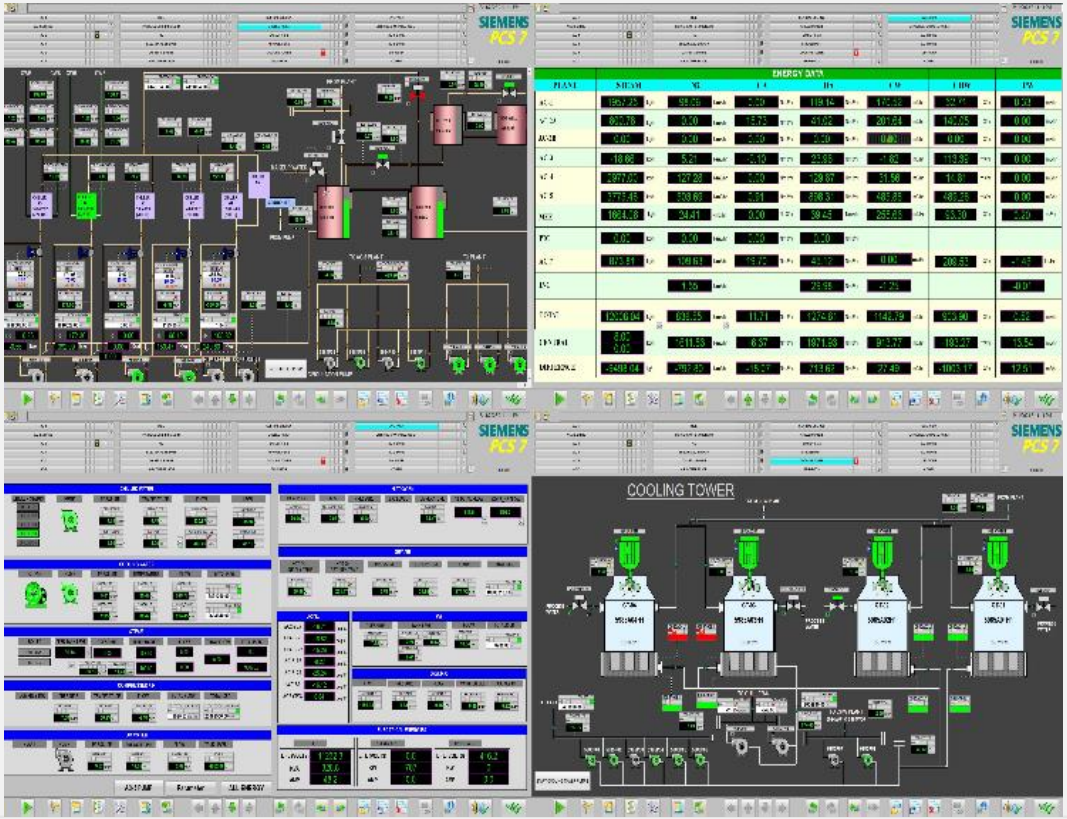
FOR ENERGY CONSERVATION PROJECTS

CAPEX APPROVAL



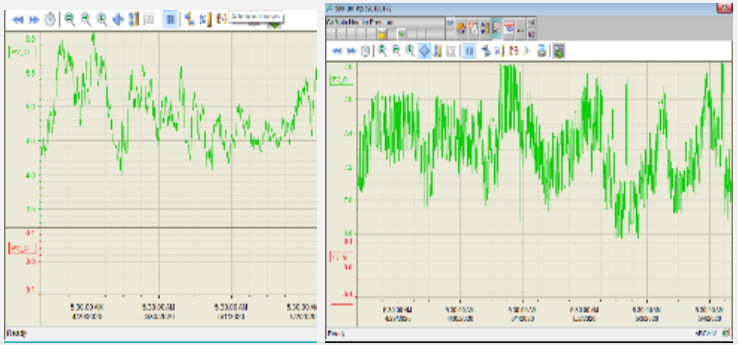
Teamwork, Employee Involvement & Monitoring

Central Utility Monitoring System

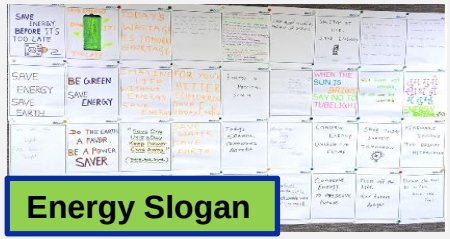


Plant wise Utility Monitoring System

Plant wise Utility Monitoring System



Teamwork, Employee Involvement & Monitoring



Energy Slogan

Batch Distribution

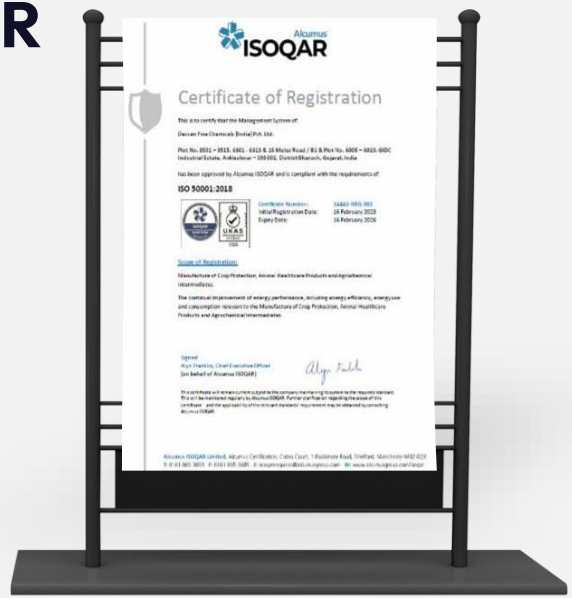
Team Award- Major Participation in Energy Week 2023

Energy Conservation Pledge in Energy Week 2023

Internal & External Training session

Implementation Of ISO 50001 : 2018

Deccan is ISO 50001:2018 CERTIFIED UNIT BY ISOQAR



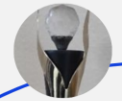
Learning & Implementation from CII

- We learnt from CII that how to analyse energy saving and data management.
- How to work towards the globalization of Indian industry and integration into the world economy.
- How they create awareness and support industry's efforts on quality, environment, energy management, and consumer protection.
- How they act as a catalyst in bringing about the growth and development of Indian Industry.

Awards & Recognitions

2014

Winner Of AIA Anandpura Trophy For BEST EXPORT Performance Amongst Large Industrial Units In GIDC Ankleshwar



2020

Platinum award (Rotary club of Dahej) for environment excellence.

2020

Safety Excellence award (Rotary club of Dahej)

2021

Best CSR initiatives(by Hon'ble ministry of state environment, consumer affairs,food distribution & forestry)

2022

Winner Of AIA Anandpura Trophy For BEST EXPORT Performance Amongst Large Industrial Units In GIDC Ankleshwar

2023

Best CSR brand of the year (Global Smart built summit, Lucknow)

2023

corporate Environment Responsibility Award (presented by the Southern Gujarat Chamber of Commerce and Industry and Gujarat Pollution Control Board)

2023

CII National Award For Excellent Energy Efficient Unit & Most Useful Presentation.

Mr. Parag Shah

parag.shah@deccanchemicals.com

+91 99240 68953

Mr. Chetan Pandya

chetan.pandya@deccanchemicals.com

+91 90990 08795

Mr. Pawan Singh

pawan.singh@deccanchemicals.com

+91 90125 79061