DODLA DAIRY LIMITED, GUNDRAMPALLY PLANT, HYDERABAD





Mr. Rajani Kumar. K V V S Plant Manager Mr. Venkat Reddy Manager -Maintenance

Mr.Kiran kumar Manager-Q&A 14 Plants Processing capacity

2.2

Million
LPD

1.4 Lakh
Farmers association

150 Milk chilling units

About Dodla Dairy!

Dodla Dairy Limited is a public limited company having its registered and corporate office at Hyderabad City of Telangana State in India. The company was incorporated in the year 1995 and production commenced in 1998. Currently, our procurement spans 5 states and we delight our customers through our products across 11 states. We operate around 150 milk chilling centres and 14 processing plants. Of these plants, nine are ISO 22000:2018 certified, five are FSSC 22000 v5.1 certified and hold ISO 50001:2011 (EnMS) certification.



Milk procurement

600 Retail Parlours .57 Million

2,000

Distributors

3,000+ Employees

- ✓ Our distribution and marketing operations include distributing our products through more than **75** sales offices, around **2500** agents and approximately **2000** distributors across **11** states in India.
- ✓ Apart from India **Dodla Dairy** has subsidiaries companies in **Singapore**, **Uganda and Kenya**.









ABOUT DODLADAIRY, GUNDRAMPALLY PLANT (HYDERABAD)



- ✓ The Gundrampally plant is a fully automated facility that began operations in December 2016. It has an installed capacity of 350,000 liters of milk per day and produces a variety of products, including curd, sterilized flavored milk, ghee, butter, paneer, and Doodh Peda. Production of these items started in February 2017.
- ✓ The plant features an advanced automated Cleaning in Place (CIP) system, which includes silos, road tankers, and all necessary equipment to ensure effective cleaning. Covering approximately 70 acres, it is the largest plant in Dodla, with 50 + acres dedicated to developing a green belt.
- ✓ The Gundrampally plant is committed to environmental sustainability, operating as a zero-discharge facility and using renewable energy for its operations.



PRODUCT RANGE AT DODLA DAIRY.





Milk | Curd | Flavored milk | Doodhpeda | Paneer | Ghee | Sweet Lassi | Butter Milk | Icecream

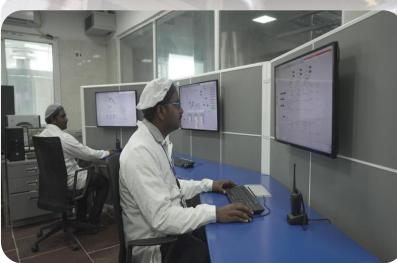
AUTOMATION PROCESSING PLANT













Dodla Dairy Gundrampally plant, follows a manufacturing value chain that emphasizes best practices to maximize capacity utilization, operating metrics, flexibility, agility, and continuous improvement of automation processes







OVERALL ENERGY CONSUMPTION - OVERVIEW

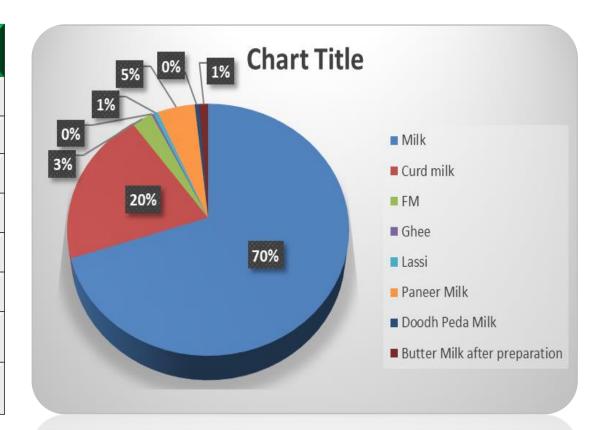


Parameters	Unite Of Measurements	2021-22	2022-23	2023-24
Annual Milk Handled	KL	56342	63009	69396
Annual Electrical Energy Consumption	Million KWH	3.572	3.745	3.942
Annual Cost Of Electricity Consumed	Million INR	28.3	34.5	35.52
Annual Thermal Energy Consumption	Million Kcal	10343	10821	11195
Annual Cost Thermal Energy Consumption	Million INR	10.879	12.063	12.480
Specific Electrical Energy Consumption	KWH/Ton of production	63.4	59.4	56.8
Specific Thermal Energy Consumption	Kcal/Ton of production	183577	171740	161321
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MILK & MILK PRODUCT DETAILS 2023-24



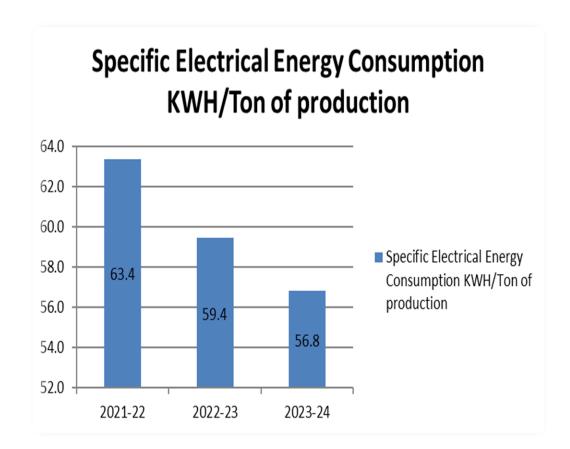
DETAILS	MILK IN KL	%
Milk	48481	69.86
Curd milk	14053	20.25
FM	1832	2.64
Ghee	195	0.28
Lassi	390	0.56
Paneer Milk	3285	4.73
Doodhpeda Milk	380	0.55
Butter Milk after preparation	780	1.12

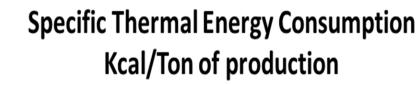


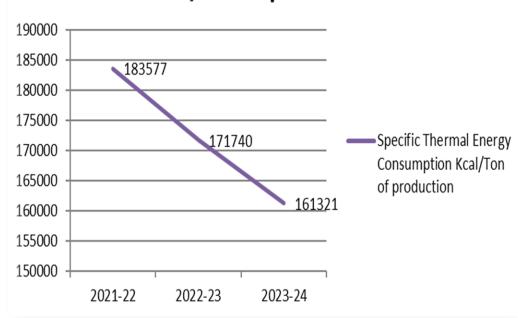


ENERGY CONSUMPTION - OVERVIEW









2022-23: - 6.2% decreased

2023-24: - 4.4% decreased









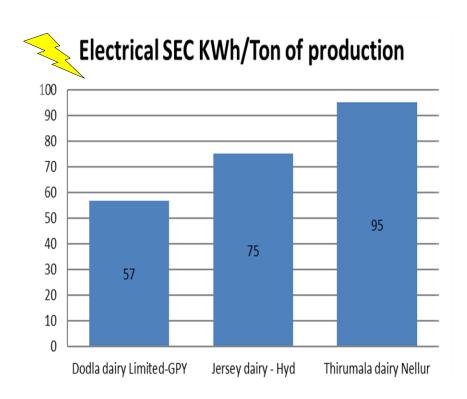


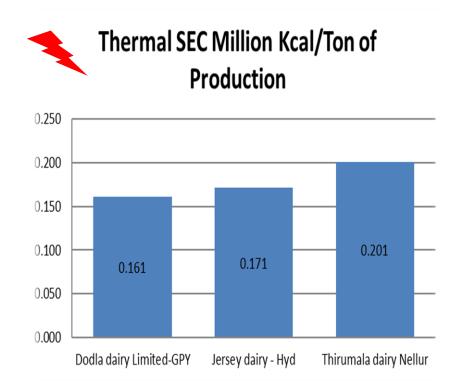




COMPETITORS BENCHMARK







Our Target is 50 Kwh/Ton & 0.140 Million Kcal Per Ton Of Production



ROAD MAP TO ACHIEVE TARGET FOR ENERGY EFFICIENCY



Year	Title of Projects	Annual Electrical Saving (Million kWh)	Annual Thermal Saving (Million Kcal)	Investment (Rs in Million)	Comments
2024 -25	0.5MW Solar plant	0.80	0	25	with 0.5MW Solar 50% EB units will b ereduced
2024 -25	VFD's for all water pumps and compressors	0.146	0	1.60	VFD's for all water pumps and compressors
2024 -25	1500KVA energy efficient transformer	0.2628	0	4.50	Auto taping transformer with energy efficient
2024 -25	IBT Chilled water motors replacing with IE4 energy efficiency motor (High pressure pumps)	0.07	0	0.5	plant chilled water pumps will be replaced with IE 4 energy efficiency motors
2024 -25	UGR motors 2nos to be replace with energy efficiency motors (from 10hp to 5hp)	0.03	0	0.12	energy efficiency motors for UGR pumps
2024 -25	Installation of Evasco condenser for Refrigeration	0.03	0	0.6	Evapco condenser instead of cooling tower
2024 -25	Stabilizer for Lighting load for load decreasing	0.02	0	0.035	separate stabilizer for lighting load
2024 -25	Solar water heaters planed for CIP water	0.00	977	2.5	For thermal savings
2024 -25	BLDC fans instead of all ceiling fans (15nos)	0.003	0	0.015	planned BLDC fans instead of regular ceiling fan
	Total	1.36	977.00	34.87	

Energy Saving projects implemented in last three years



Year	No of Energy saving projects	Electrical savings (kWh)	Thermal savings (Million Kcal)	investments (INR Million)	Total Savings (INR Million)	Payback period (in months)
2021-22	3	201800	0	1.2869	1.65	9.33
2022-23	11	104674	0.83	0.1916	1.69	1.36
2023-24	7	1728664	0.93	54.272	16.36	39.80
Total	21	2035138	1.76	55.7505	19.71	33.94



PROJECTS IMPLEMENTED IN 2021-22



Title of Projects	Year	Annual Electrical Saving (kWh)	Electrical Saving (kW)	Annual Electrical Cost Saving (Rs) Million	Quantity (Wood kg)	Unit of Measurem ent Kcal/Kg	Annual Thermal Cost Saving (Rs million)	Total Annual Savings (Rs million)	Investment Made (Rs million)	Pay back (Months)
Chilled water return PHE	2021-22	29103	29103	0.239	0	0	0	0.2386	0.95	47.77
ETP Air Blower system	2021-22	78840	78840	0.6465	0	0	0	0.6465	0.3219	5.98
KCX6 Compressor-1, Pulley modification	2021-22	93857	93857	0.7696	0	0	0	0.7696	0.015	0.23



PROJECTS IMPLEMENTED IN 2022-23



Title Of Projects	Year	Annual Electrical Saving (Kwh)	Electrical Saving (Kw)	Annual Electrical Cost Saving (Rs Million)	Quantity (Woods Kgs)	Unit Of Measureme nt Kcal/Kg	Annual Therma I Cost Savin (Rs Million)	Total Annual Savings (Rs Million)	Investm ent Made (Rs Million)	Payback (Months)
KCX6 Compressor-2 , Pulley modification	2022-23	93857	93857	0.7696	0	0	0	0.7696	0.015	0.23
Air Compressor effective utilization	2022-23	34414	34414	0.2822	0	0	0	0.2822	0.1	4.25
Boiler condensate water recovery implemented from 55% to 75%	2022-23				81111	3000	0.2799	0.2799	0.03	1.29
VFD installed for Boiler ID & FD fan motors	2022-23	29200	29200	0.2394	0	0	0	0.2394	0.12	6.0
Auto matic ON-OFF timers provided for IBT Agitator motors	2022-23	35040	35040	0.2873	0	0	0	0.2873	0.0066	0.28
Motion Sensors provided for lights	2022-23	7738	7738	0.0635	0	0	0	0.0635	0.012	2.27
Crate washer -1 pump replaced	2022-23	9581	9581	0.0786	0	0	0	0.0786	0.005	0.76
Crate washer -2 pump replaced	2022-23	9581	9581	0.0786	0	0	0	0.0786	0.005	0.76
Automatic ON-OFF timers provided for all streetlight	2022-23	3679	3679.2	0.0302	0	0	0	0.0302	0.0015	0.597
ETP secondary clarifier motor timer provided (For Energy saving)	2022-23	9855	9855	0.0808	0	0	0	0.0808	0.0015	0.223
ETP Bio Gas (Methane gas) utilization system (saving converted to wood)	2022-23	0	0	0	241252	3000	0.8323	0.8323	0.04	0.58

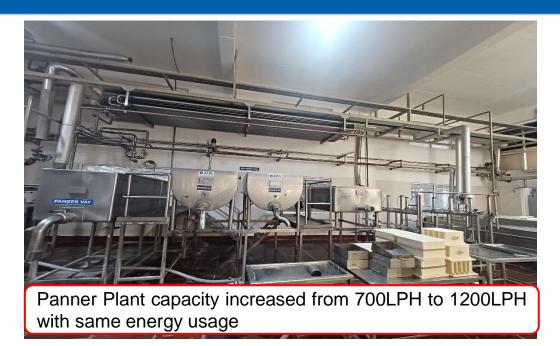
PROJECTS IMPLEMENTED IN YEAR 2023-24



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Title of Projects	Year	Annual Electrical Saving (kWh)	Electrical Saving (kW)	Annual Electrical Cost Saving (Rs) Million	Quantity (wood ton)	Unit of Measurement Kcal/Kg (mill. Cal)	Annual Thermal Cost Saving (Rs million)	Total Annual Savings (Rs million)	Investm ent Made (Rs million)	payback (Months)
Homogenizer head cooling system	2023-24	0	0	0	0	0	0	0.162	0.006	0.44
High pressure pump installed for IBT Chilled water flow increasing	2023-24	32850	32850	0.29	0	0	0	0.293	0.28	11.47
Installed the 1MW solar plant in open area	2023-24	1496500	1496500	13.35	0	0	0	13.3488	52.8	47.47
Heat recovery units	2023-24	0	0	0	268163.3	810	0.93	0.9252	0.585	7.59
Lighting Solar installed for all external lights	2023-24	13140	13140	0.12	0	0	0	0.1172	0.26	26.62
We have installed the one submersible2hp pump instead of 5HP agitator motor (Total 4nos)	2023-24	71288	71288	0.6559	0	0	0	0.6559	0.076	1.39
We have arranged the Butter cold room anterooms fabricated for avoiding direct entry air, so we have saved the Refrigeration power units	2023-24	96725	96725	0.8628	0	0	0	0.8628	0.265	3.69

INNOVATIONS & INITATIVES FOR ENERGY SAVING











INNOVATIVE PROJECTS FOR SAVING ENERGY







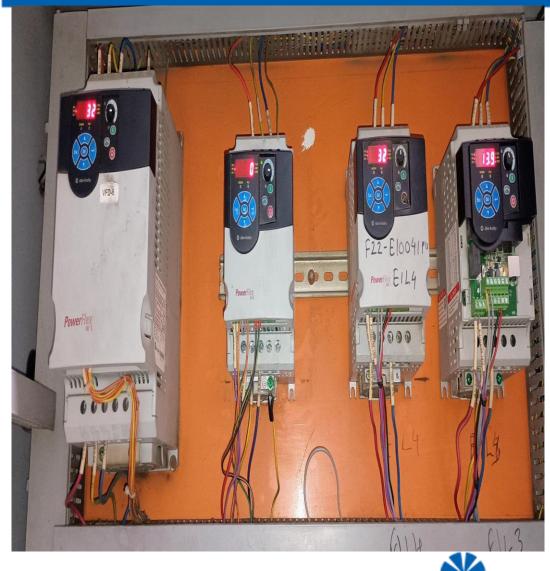
We set up a child water circulation system using plunger seals on homogenizers (All 3 homogenizers).







EFFICIENCY UTLIZATION ...Plant Process were changed with VDF Drives for energy saving



Plant motors were placed with variable frequency drives (VFDs) around 230 installed ie 80% of the plant motors were now running with VFDs. which helps in saving energy.



INNOVATIVE PROJECTS IMPLEMENTED with minimum Capital

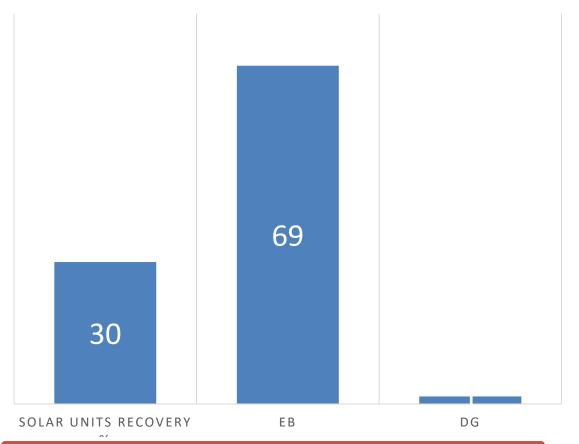


Name of the Project	Brief description	implementing the project	Project category (A/B/C/D)	Replicability	Impact on Sec	Year of Implemen tation	Annual Savings (Rs. In lakhs)	Investment (Rs. In lakhs)
Solar - DG synchronization	We have 1MW new solar, it was not synchronization with DG . Since they were set due to separate inverters installed	We have added manually solar load to DG set, after taking 50% load of DG set and done synchronization	В	We can replicability across our plants	12168 Units	2023	2.8	0
Panner PHE capacity increase	Panner PHE is 700LPH and running with 100% utilization .as the production increased .	We have fabricated the one Tubular heater for hot water circulation system in house fabrication	В	We can replicability across our plants	Time and efficiency increase	2023	2	0.08
Plunger cooling	frequently damages during heat	We have arranged child water circulated system in Homogenizer plunger seals.	В	We can replicability across our plants	Spares were minimizes and also break downs	2023	1.6	0.06

ENERGY SOURCES IN THE SITE



SOLAR UTILIZATION



We have installed solar power 1.5 MW and generated / consumed the up to 30% load in plant electrical power consumption. we have generated solar power up to 40% in peak generation plant load.

Power utilization sources in plant









UTILIZATION OF RENEWABLE ENERGY SOURCES



ON SITE RENEWABLE ENERGY Consumption % Of Overall Electrical **Technology Installed Capacity** Sours Year (Solar/Wind/Biomass (In Million **Energy Consumption** Investment (In MW) Kwh) Etc) Solar 2021-22 Solar 0.5mw 0.6964 16% 2022-23 Solar 0.5 mw 0.6923 16% 8 CR Solar 2023-24 Solar Solar 1.5mw 1.7343 30%

OFF SITE RENEWABLE ENERGY - Nil



SOLAR ENERGY.





Dodla Dairy has successfully installed solar power plant at Gundrampally plant, Hyderabad, currently meeting 40% of the facility's energy needs. The company plans to increase this share to 50% through renewable energy sources. By integrating solar power into its operations,

Gundrampally plant is reducing its reliance on conventional energy, thereby minimizing carbon emissions and fostering a cleaner environment

CARE FOR ENVIRONMENT





WHAT DODLA DOES TO SAVE EARTH





Rain Water Harvesting System In Place



100% Utilization of ETP (Recycling) Water, GAS and Sludge



Reduction Of Carbon Foot Print



Renewable Energy Being Used as Solar



Social Forestry is Done In The Plant



100% Recycling of Packaging Material Wastage



Ecological Balance



Zero Wastage to The Environment











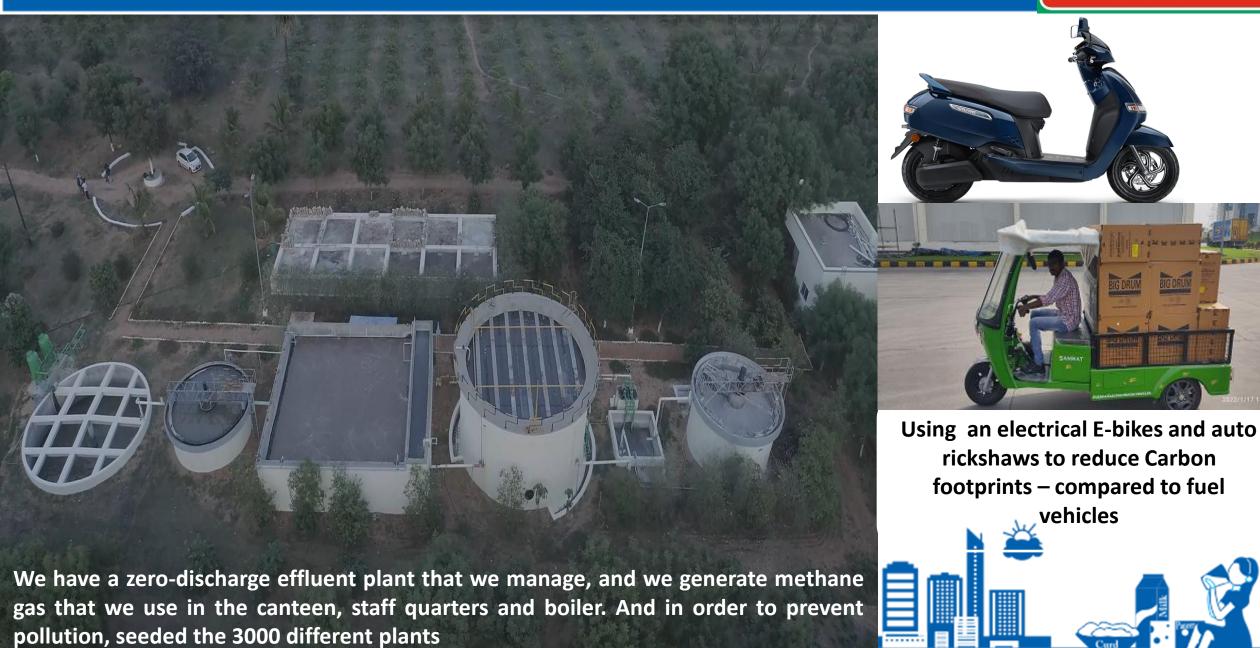






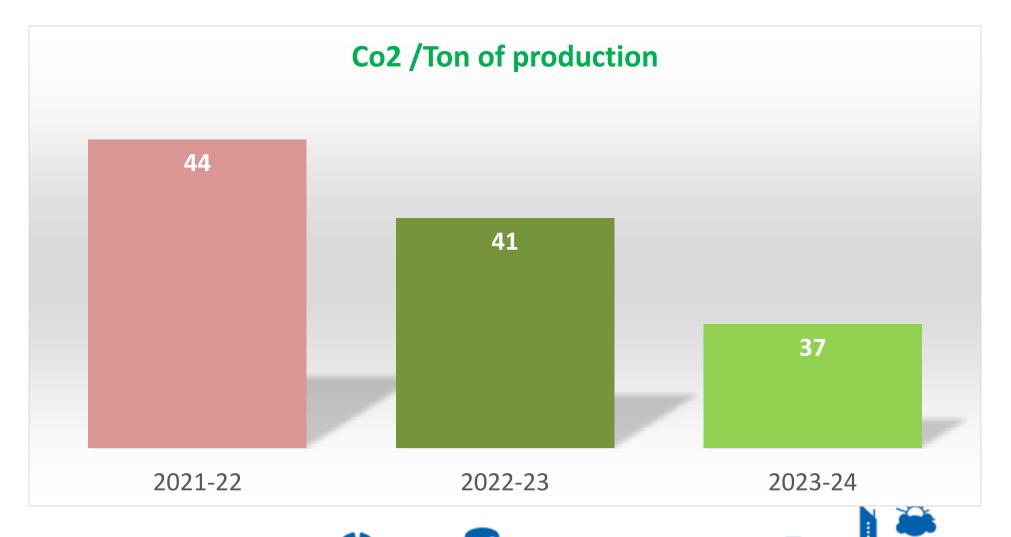
ZERO DISCHARGE EFFLUENT





CO2 PRODUCTION IN THE SITE







Sand And Carbon Filters For ETP Outlet & DIGITILIZATION OF DOCUMENTATION



we installed sand and carbon filters to ETP outlet. We are utilizing this water for crate washers, toilets flush, milk vehicle cleanings out sides and for Garden purpose.

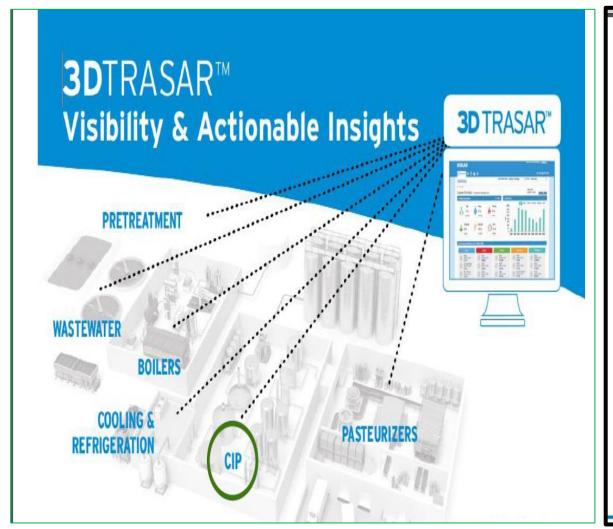
Paperless works at Gate, and digital logs were maintained in the plant

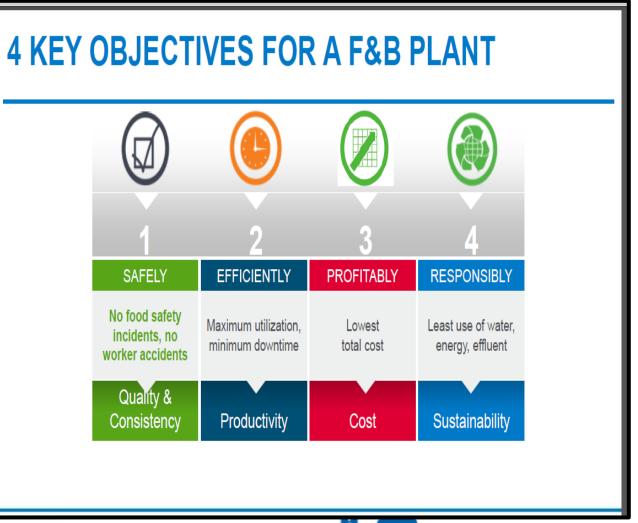


we are on move to paperless gate entry, log books and documentation in digital form.



IOT technology is adopted for monitoring plant machinery cleaning operations







NET ZERO ROADMAP FOR CORBON FOOTPRINTS.



CO2 saving from Logistics	2022-23	2023-24
CPL	2.19	1.97
Tankers Capacity Utilization by change of vehicle capacity	84%	91%
ReductioCo2 in KG / day from 22-23		537

By 2028 planning to change all vehicle to solar charging vehicles





YEAR	Kg Co2 reduction By Ton of Production in plant
2021-22	44
2022-23	41
2023-24	38
2024-25	30
2028-29	0



AWARDS.



























CII Award Best practices in cold storage -2018



THANK YOU...



