

DODLA DAIRY LIMITED, Gundrampally plant



Gundrampally -Plant
HYDERABAD



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Presented By

Mr. Rajani Kumar. K V-V S – Plant Manager

Mr. Umakanth – Manager – Production

Mr. Venkat Reddy – Manager - Maintenance



About Dodla Dairy Ltd



Dodla Dairy Limited (DDL) is a leading private dairy company in India. The Company is also having overseas operations in Africa. Dodla commenced its production in the year 1998. The company has its strategies & operations for creating value across the dairy value chain. While the core business is dairy processing in liquid milk and value added products, Dodla has a strong value creation model consisting of procuring milk directly from dairy farmers along with empowering them and strong merchandising for creating strong market linkages

Manufactured Capital

Machinery for transforming raw milk into various dairy products. Milk collection centres ensure a steady supply of raw materials, while storage facilities efficiently manage inventory. To meet consumer demands and maintain a strong presence in the dairy industry

Dodla Dairy Limited – Gundrampally Plant

- **Gundrampally plant is Fully Automated plant commenced its operations in Dec 2016.**
- **Has an installed capacity of 3.5 Lakh liters of milk per day.**
- **Facility Manufactures products like curd ,Sterilized Flavored Milk, Ghee, Butter, Paneer, Doodh Peda, ice cream etc.,**
- **In addition to automated operations, plant has facility for automated CIP which includes silos, the Road Tanker and all Equipment which will to ensure proper cleaning.**
- **Gundrampally plant is having area of 75acres. In that 30 acres being developed as a green belt.**
- **Gundrampally plant is not discharging any Effluent to the Environment.**
- **Gundrampally is using renewable energy for its operations.**

DDL-Gundrampally Plant Range of Products



- Milk
- Curd
- Flavored milk
- Doodhpeda
- Paneer
- Sweet Lassi
- Butter Milk
- Ice cream
- Ice Candy
- Ghee



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



PROCESSING SECTION



Overall Energy Consumption - Overview



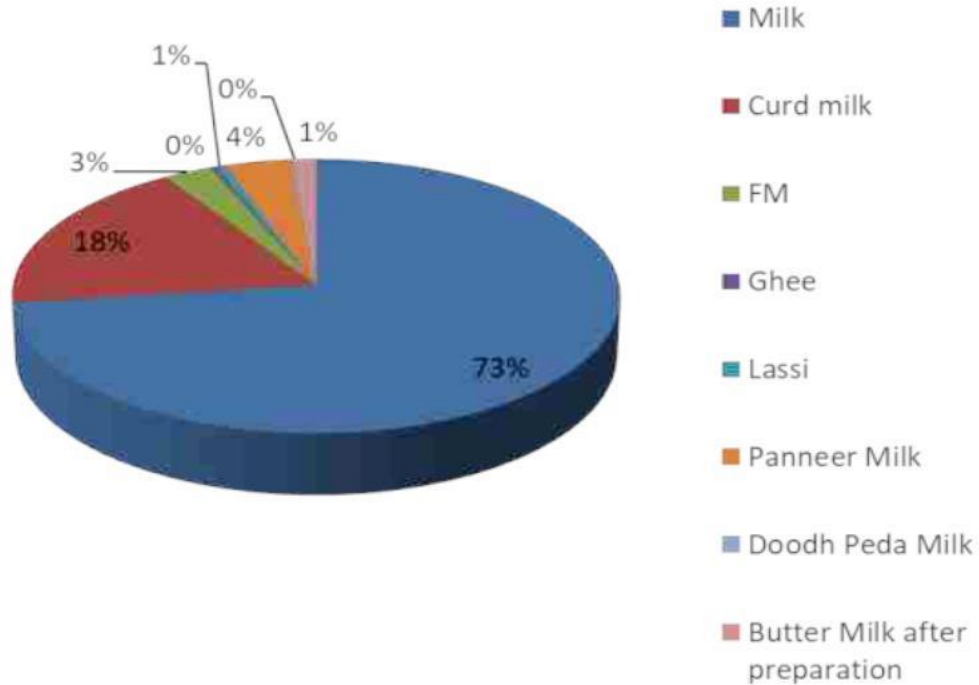
Parameters	Unite Of Measurements	2020-21	2021-22	2022-23
Annual Milk Handled	KL	51356	56342	63009
Annual Electrical Energy Consumption	Million KWH	3.372	3.572	3.745
Annual Cost Of Electricity Consumed	Million INR	27.2	28.3	34.5
Annual Thermal Energy Consumption	Million Kcal	9368	10343	10821
Annual Cost Thermal Energy Consumption	Million INR	10.083	10.879	12.063
Specific Electrical Energy Consumption	KWH/Ton of production	65.7	63.4	59.4
Specific Thermal Energy Consumption	Kcal/Ton of production	182409	183577	171740



Plant Milk & Milk Products Details – 2022-23



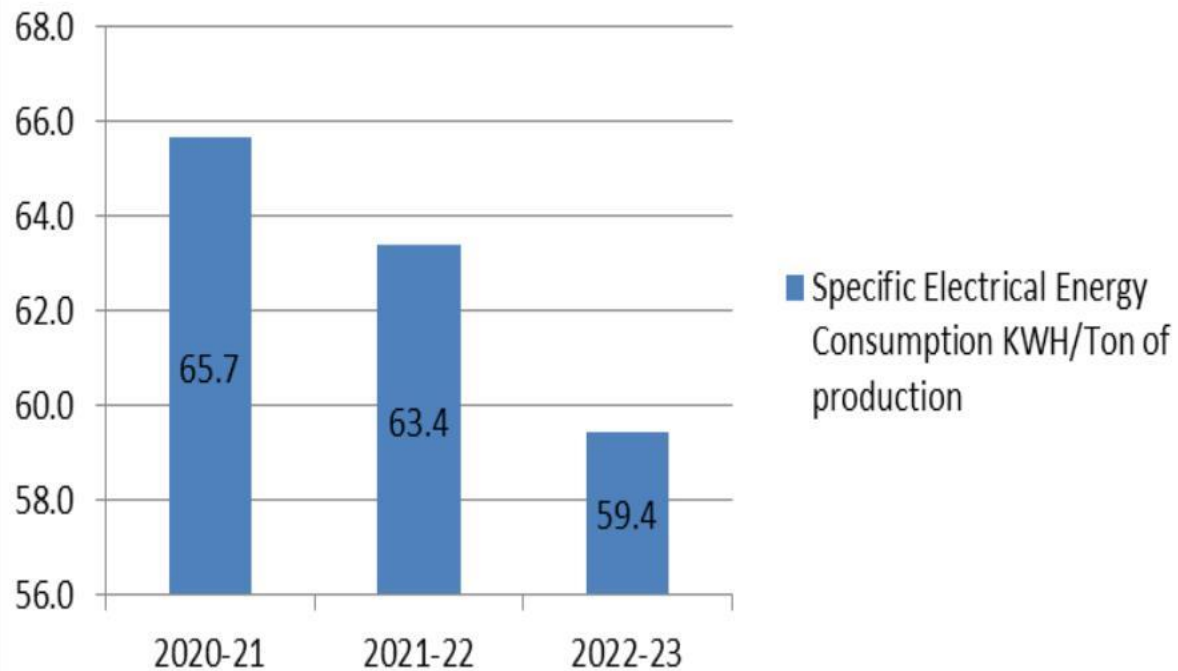
Milk is Major product around 73%



M.H DETAILS	MILK IN KL	%
Milk	45923	72.9
Curd milk	11477	18.2
FM	1733	2.7
Ghee	220	0.3
Lassi	351	0.6
Panneer Milk	2447	3.9
Doodh Peda Milk	154	0.2
Butter Milk after preparation	705	1.1

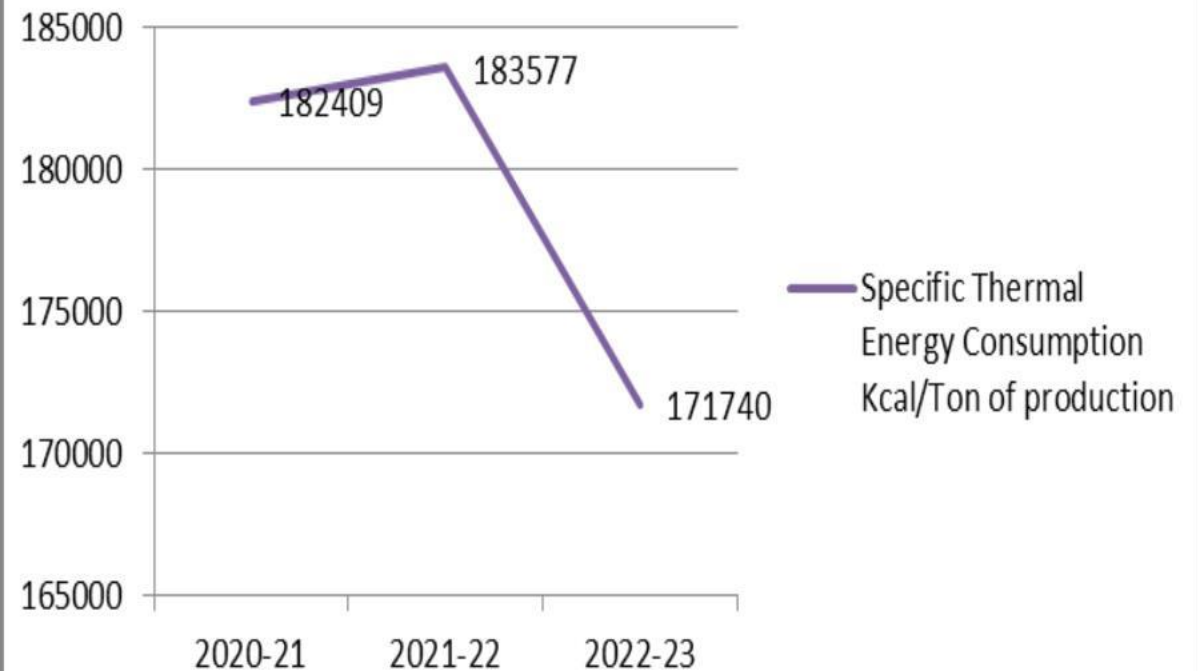


Specific Electrical Energy Consumption KWH/Ton of production



2021-22 : - 3.5% decreased
2022-23: - 6.2% decreased

Specific Thermal Energy Consumption Kcal/Ton of production



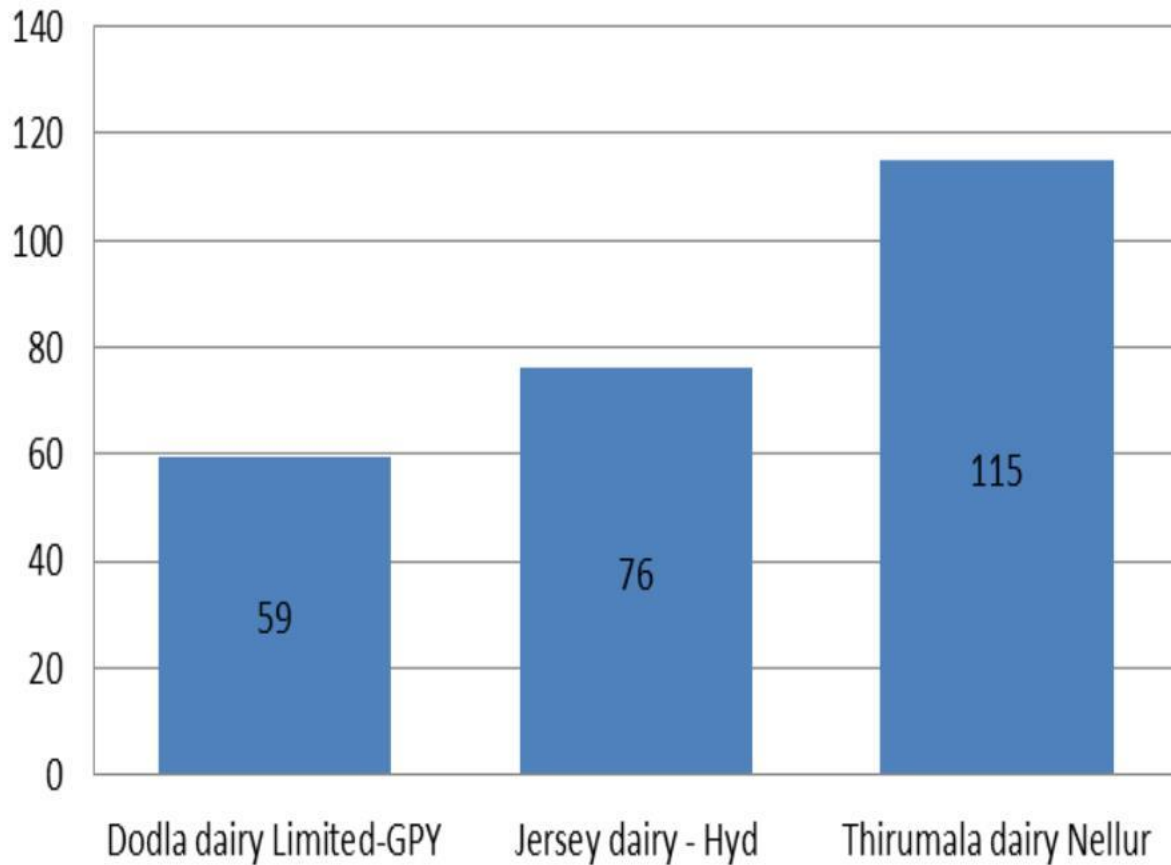
2021-22 : - 0.63% increased (CIP chemical trail runs)
2022-23: - 6.4% decreased



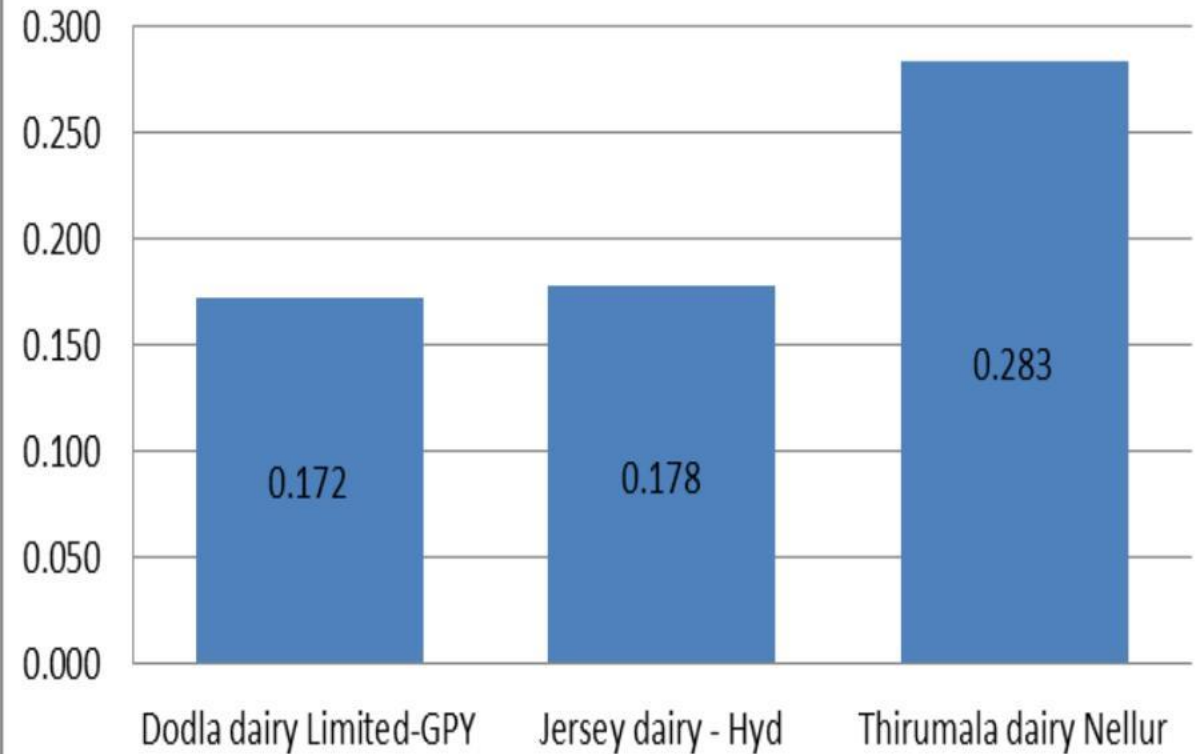
COMPETITORS NATIONAL BENCH MARK



Electrical SEC KWh/Ton of production



Thermal SEC Million Kcal/Ton of Production



Our Target Is 50 Kwh/Ton Of Production And 0.150 Million Kcal Per Ton Of Production

Road Map To Achieve Target For Energy Efficiency Bench Marking



S.NO	Year	Title of Projects	Annual Electrical Saving (Million kWh)	Annual Thermal Saving (Million Kcal)	Investment (Rs in Million)	Comment
1	2023	1MW Solar plant	1.75	0	55	We have plan for 1MW Solar for up to 40% EB units reducing
2	2023	Heat recovery unit (De-Super heater)	0	7039	0.81	At present we have recovered only 20% , we will plan 90-100%
3	2023	IBT Agitator submersible 1HP motor (5hp to 1hp)	0.07	0	0.32	We will plan for reducing IBT agitator motor capacity
4	2023	IBT Chilled water motors replacing with IE4 energy efficiency motor (High pressure pumps)	0.07	0	0.5	We will plant chilled water pumps replaced with IE 4 energy efficiency motors
5	2023	Streetlights to be replace with solar lights (30nos)	0.01	0	0.11	30nos streetlights will replace with solar lights
6	2023	UGR motors 2nos to be replace with energy efficiency motors (from 10hp to 5hp)	0.03	0	0.12	We will plane energy efficiency motors for UGR pumps
7	2023	Installation of Evapco condenser for Refrigeration	0.03	0	0.6	We will plan Evapco condenser instead of cooling tower
8	2023	Stabilizer for Lighting load for load decreasing	0.02	0	0.035	We will plan separate stabilizer for lighting load
9	2023	BLDC fans instead of all ceiling fans (15nos)	0.003	0	0.015	We will plan BLDC fans instead of regular ceiling fan
		Total	1.98	7039	58	

PROJECTS IMPLEMENTED IN YEAR 2020-2021



S.NO	Title of Projects	Year	Annual Electrical Saving (kWh)	Electrical Saving (kW)	Annual Electrical Cost Saving (Rs) Million	Quantity (Wood kg)	Unit of Measurement Kcal/Kg	Annual Thermal Cost Saving (Rs million)	Total Annual Savings (Rs million)	Investment Made (Rs million)	Pay back (Months)
1	Heat recovery system (In house fabrication)	2020-21				13519	3000	0.0466	0.0466	0.017	4.37
2	36Watts tub lights replaced with 20Watts LED Tubes	2020-21	2920	2920	0.024	0	0	0	0.0239	0.0275	13.78

PROJECTS IMPLEMENTED IN YEAR 2021-2022



S.NO	Title of Projects	Year	Annual Electrical Saving (kWh)	Electrical Saving (kW)	Annual Electrical Cost Saving (Rs) Million	Quantity (Wood kg)	Unit of Measurement Kcal/Kg	Annual Thermal Cost Saving (Rs million)	Total Annual Savings (Rs million)	Investment Made (Rs million)	Pay back (Months)
1	Chilled water return PHE	2021-22	29103	29103	0.239	0	0	0	0.2386	0.95	47.77
2	ETP Air Blower system	2021-22	78840	78840	0.6465	0	0	0	0.6465	0.3219	5.98
3	KCX6 Compressor -1 , Pulley modification	2021-22	93857	93857	0.7696	0	0	0	0.7696	0.015	0.23

PROJECTS IMPLEMENTED IN YEAR 2022-2023



S.NO	Title Of Projects	Year	Annual Electrical Saving (Kwh)	Electrical Saving (Kw)	Annual Electrical Cost Saving (Rs) Million	Quantity (Woods Kgs)	Unit Of Measurement Kcal/Kg	Annual Thermal Cost Saving (Rs Million)	Total Annual Savings (Rs Million)	Investment Made (Rs Million)	Payback (Months)
1	KCX6 Compressor-2 , Pulley modification	2022-23	93857	93857	0.7696	0	0	0	0.7696	0.015	0.23
2	Air Compressor effective utilization	2022-23	34414	34414	0.2822	0	0	0	0.2822	0.1	4.25
3	Boiler condensate water recovery implemented from 55% to 75%	2022-23				81111	3000	0.2799	0.2799	0.03	1.29
4	VFD installed for Boiler ID & FD fan motors	2022-23	29200	29200	0.2394	0	0	0	0.2394	0.12	6.0
5	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
6	Motion Sensors provided for lights	2022-23	7738	7738	0.0635	0	0	0	0.0635	0.012	2.27
7	Crate washer -1 pump replaced	2022-23	9581	9581	0.0786	0	0	0	0.0786	0.005	0.76
8	Crate washer -2 pump replaced	2022-23	9581	9581	0.0786	0	0	0	0.0786	0.005	0.76
9	Automatic ON-OFF timers provided for all streetlight	2022-23	3679	3679.2	0.0302	0	0	0	0.0302	0.0015	0.597
10	ETP secondary clarifier motor timer provided (For Energy saving)	2022-23	9855	9855	0.0808	0	0	0	0.0808	0.0015	0.223
11	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

INOVATION IN PLANTS

Heat Recovery in house Fabricated



Chilled Water return PHE



ETP methane Gas using in canteen and Boiler



ON & OFF Timers arranged for IBT Agitators



Motion sensor arranged internal lightings



Auto Timer arranged external lighting



KCX-6 compressor RPM reduced



Innovative Projects implemented



Name of the Project	Brief description on why innovative (within 450 Characters)	Trigger for implementing the project (within 450 Characters)	Select Project category (A/B/C/D)	Replicability	Impact on SEC	Year of Implementation	Annual Savings (Rs. In lakhs)	Investment (Rs. In lakhs)
CIP water reduced	We are using CIP water daily 130000 LPD for CIP, we have Reduced CIP water consumption by effective cleaning	We have utilized a chemical instead of Caustic lye for effective cleaning and CIP and water reduction	B	We are in process of replicability across all our plant operations	28059	2022	2.3	0
Solar - DG synchronization	We have 0.5MW rooftop solar, but not synchronization with DG set due to Building wise separate inverters installed	We have added manually solar load to DG set , after taking 50% load of DG set	B	We can replicability across our plants	12168	2022	2.8	0
Homogenizers Plunger cooling system	Homogenizer seals frequently damages during production.	We have arranged child water circulated system in Homogenizer plunger seals.	B	We can replicability across our plants	-	2022	1.6	0.06
FM Sterilizer Tubular descaling system	Flavored milk bottle retort batch sterilization taking long time	One SMS Union nipple was set up in the retort tubular Inlet & Outlet line for the circulation of de-scaling chemicals through a separate pump.so as not to scale	B	We can replicability across our plants	-	2022	To Control the FM Batches sterilization times.	0

INNOVATION PROJECTS



One SMS Union nipple was set up in the retort tubular Inlet & Outlet line for the circulation of de-scaling chemicals through a separate pump, so as not to scale



We set up a child water circulation system using plunger seals on homogenizers.



Utilization Of Renewable Energy Sources

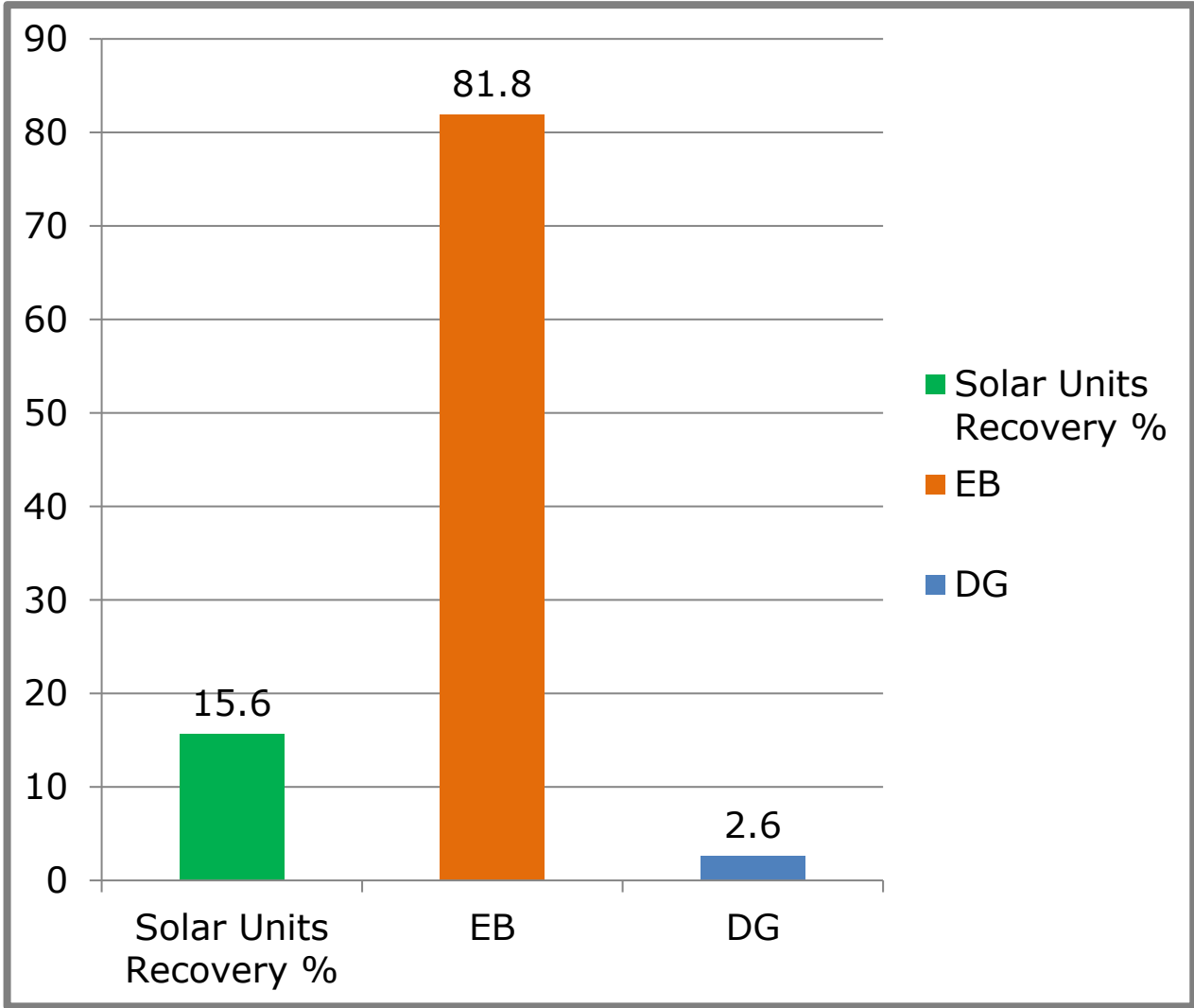


ON SITE RENEWABLE ENERGY

Sours	Year	Technology (Solar/Wind/Biomass Etc)	Installed Capacity (In MW)	Consumption (In Million Kwh)	% Of Overall Electrical Energy Consumption	Investment
Solar	2020-21	Solar	0.5mw	0.7221	17%	30million
Solar	2021-22	Solar	0.5mw	0.6964	16%	
Solar	2022-23	Solar	0.5mw	0.6923	16%	

OFF SITE RENEWABLE ENERGY - Nil

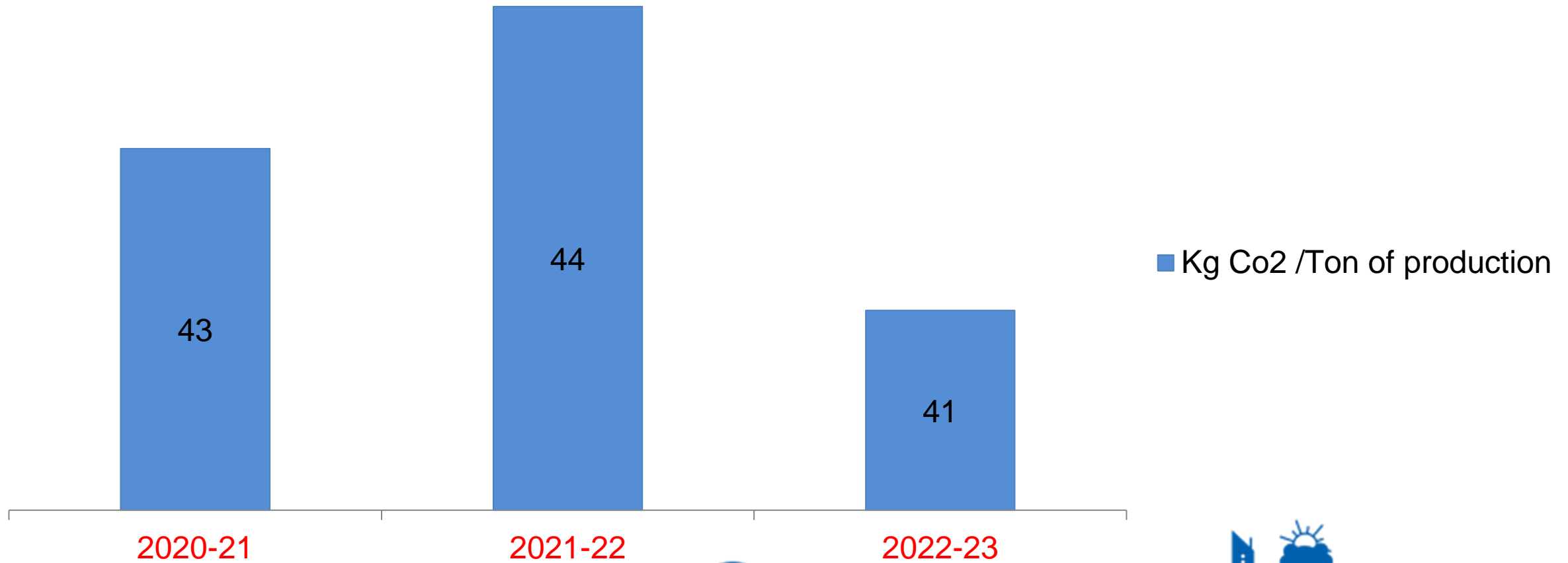




We have installed solar power, 0.5MW and generate / consumed the up to 16% of load in plant electrical power consumption And we have taken Budget approvals for 1MW solar power plant in 2023-24 – work under progress. We will plant 50% load decreasing from EB



Kg Co2 /Ton of production



Conserving Resources.
Preserving the Future.



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 Taken Care



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




Nil Discharge effluent

We have in place effluent plant that manage, Nil effluent and we generate methane gas that we use in the canteen, staff quarters and boiler. And in order to prevent pollution, planted the 1600 different plants.

Using an electrical auto rickshaw to reduce Carbon foot prints



An aerial photograph of a large industrial facility, likely a dairy plant, with several large buildings. The roofs of the buildings are covered with solar panels. The facility is surrounded by greenery and a paved area with some vehicles.

Dodla Dairy has successfully installed solar panels at Gundrampally, These solar Panels contribute to meeting 16% and we have plan to establish up to 50 % of the power requirements in this plant through renewable energy sources. By integrating solar power into its operations, Dodla Dairy Gundrampally plant reduces its reliance on conventional energy sources, minimizing carbon emissions and promoting a cleaner environment.





Net Zero Road Map

WHAT DODLA DOES TO SAVE EARTH



YEAR	SOLAR INSTALATION	Kg Co2 reduction By Ton of Production
2022	0.5 MW	41
2023	1.0 MW	38
2024	2.5 MW	30





DODLA DAIRY CEO
Mr. BVK Reddy
Elected as a
(Professional and Planners)
Indian Dairy Association



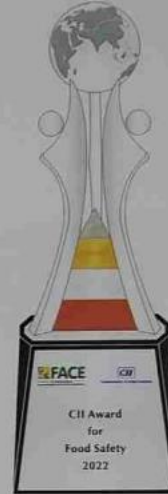
**INDIAN DAIRY
ASSOCIATION**

इंडियन डेरी एसोसिएशन





CII Award
for
Food Safety
2022



Commendation Certificate
for
Significant Achievement in Food Safety

*Dodla Dairy Ltd.
Hyderabad*



Director General

Confederation of Indian Industry

President

Confederation of Indian Industry





Best Practices in Cold Storage, Large Segment awarded by CII (Confederation of Indian Industry) National Cold Chain Awards, 2018.





We are proud to announce that Dodla Dairy Ltd. has been recognised as the

Dairy Company of The Year

at India Food Safety Summit & Awards 2022



THANK YOU!

Dodla dairy LTD, Gundrampally plant, Hyderabad, Telangana.
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