GOKUL MILK PROJECT

Unit Profile :

The Kolhapur Zilla Sahakari Dudh Utp. Sangh Ltd., Kolhapur, formerly known as "Gokul" was established on 16.03.1963.Adoption of new technology, quality policy proper blend of producers, management & consumer could result in becoming "Gokul" a strong bridge of faith & satisfaction between milk producers & custumers, which was the purpose of its establishment. As on today "Gokul" is the leader in the market & has established many landmarks breaking of its own previous records. As a result Gokul is awarded with 13 National Productivity Council awards. As on date, the average milk collection of the year is 4.87 lakh LPD with peak of 6.07 lakh LPD.in 2007-08 Gokul has supported to producers by all technical input services like animal health care, feed & fodder supply animal breeding facility with all necessary training in its own training center. The producers through their village co-op. dairy society get proper input services & financial assistance.

Since the Anand pattern contemplates integrated approach of Dairy Development, Gokul has also strengthened its Animal Husbandry, Artificial Insemination, Feed and Fodder Development activities. These services are undertaken for increasing per animal production as well total milk production. The A.H. coverage of the Gokul is one of the best in the country.The entire cattle population of the district is covered through 35 A.H. Centers manned by 60 Veterinarians, who provide round the clock Veterinary services. At the same time, being the farmers cooperative, the entire expenditure on AH/AI activities are heavily subsidized.

More than Rs.42.00 Crores have been paid as 'extra price' during 2007-08, than the price declared by the Govt. The input services are either free or at subsidized rate are the additional benefit to the producer.Till date, to maintain quality, 4200 milko testers, 75 fattomatic machines, approx. 728 computers along with manpower training facility for scientific organization culture, mission, vision & values, have been provided to the primary cooperatives.

This organization is based on quality production & rendering services to milk producers as well as assured & quality milk supply to the customers at reasonable rate. The mission is aimed at quality based remunerative price to the milk producer with all technical inputs services for production enhancement & training.

A] Future Strategies :

To accept the challenges arose due to Globalization, we have equipped ourselves by maintaining quality, scientific approach & advanced technology & trained devoted manpower. In near future we have planned & the work is in progress for –

- Expansion of cattle feed plant from 200 MT to 500 MT.
- New product launch like Dahi, Desert etc
- Liquid milk availability to all parts of Maharashtra.
- Renovation of Marketing chain, strategy & required materials like booths, refrigerated vans etc.
- Creation of awareness amongst customers regarding quality milk production knowledge.
- Installation of Bulk Milk Coolers in village dairy co-op societies under GMP Programme.

Now Gokul has accredited with ISO 9001-2000, HACCP 15000-1998 & EIC Licenses. Gokul is well equipped with 7 lakh LPD capacity dairy plant, (40 MTPD Milk Powder Plant, Butter, Table butter, Powder, Shrikhand, Lassi, Paneer,Curd
making facility) and is now serving to more than 5,00,000 producers & same No. of consumers who are working for their mutual benefits.

We have launched ambitious "**Gokul Gram Vikas Yojana**". This is unique & is an integrated approach for the rural development- socio economically, in which villagers plan for their own village on short term & long term basis where the field Extension worker assists them. He is being designated as "Gokul Doot". The plans are executed, monitored & evaluated by the villagers themselves.

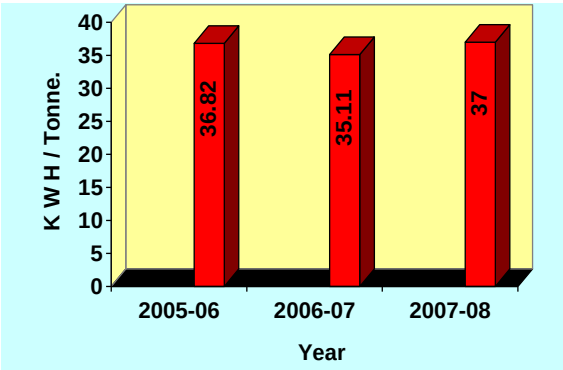
Name of Product	Units	Production in 2007-08
Milk [Processed]	MT	234834
Skim Milk Powder.	MT	3571
Ghee	MT	457
Butter	MT	3647
Table Butter	MT	186
Shrikhand	MT	88
Lassi	KL	34
Paneer	MT	21
Curd	MT	38

Energy Consumption

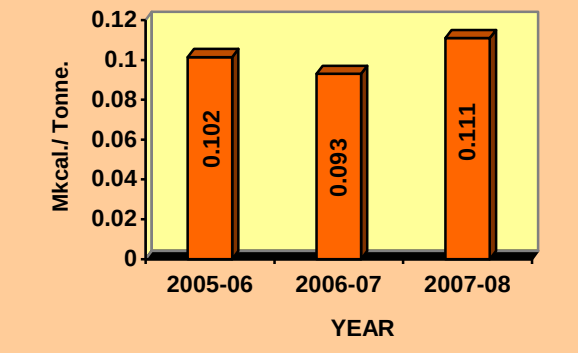
The energy consumption and milk handled at the dairy in the years 2005-2006, 2006-2007 & 2007-2008 is as follows .

DESCRIPTION	UNIT	2005-2006	2006-2007	2007-2008
Milk Handled	MetricTones	238004	253464	234834
Total Energy Cost	Rs. in Lakhs	887	928	1074
Energy cost as % of manufacturing cost	Percent	32.90	48.12	35.44
Total energy consumption - Electrical	Lakhs KWH	87.65	89.00	86.90
Specific energy consumption Electrical	KWH/Tones	36.82	35.11	37.00
Total energy consumption Thermal	Million Kcal.	24157	23679	26160
Specific energy consumption Thermal	Million Kcal/Tone	0.1015	0.0930	0.111
Percentage of electrical energy consumed in the plant	%	99.98	99.99	99.98
Percentage of thermal energy consumed in the plant	%	99.99	99.54	99.64

Year	Installed Capacity M.T.	Milk Handled M.T	Capacity Utilization %
2005-2006	263165	238004	90.44
2006-2007	263165	253464	96.31
2007-2008	263165	234834	89.23

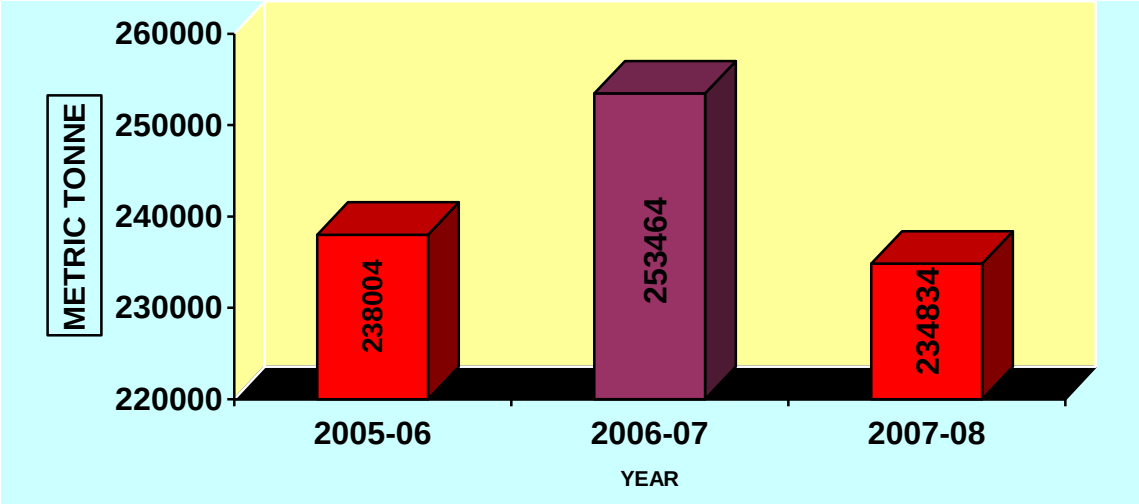


Specific Energy Consumption -Electrical Kwh / Tonne.

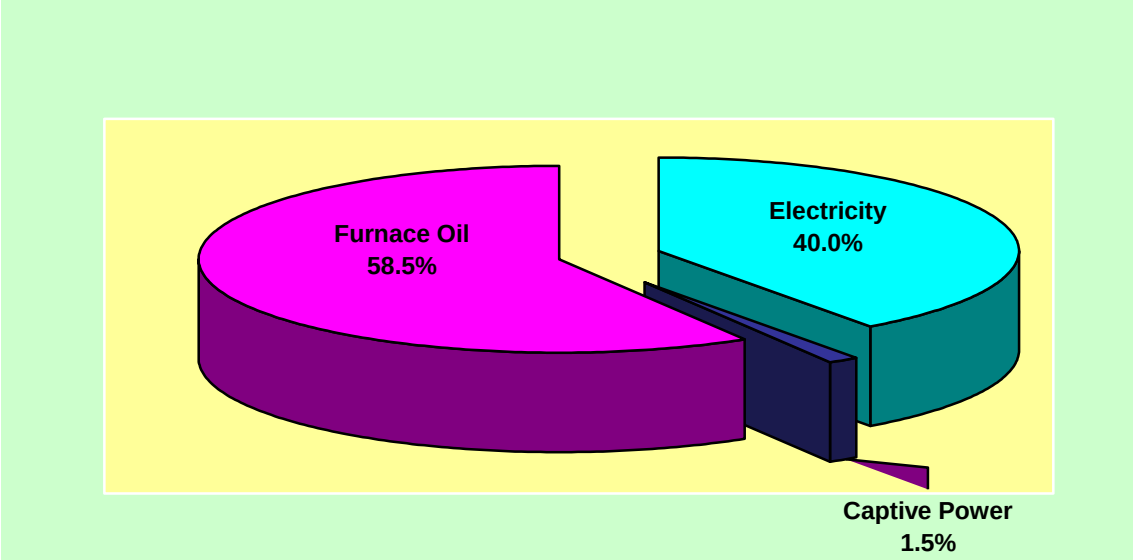


Specific Energy Consumption – Thermal Mkcal /Tone

Milk Handled :



ENERGY COST : 2007- 08



Achievement of Energy Saving ;-2005-06

Year of Commissi on-ing The Project.	Project Description	Achievement of energy saving per year basis				Investment incurred on the project RsLakh
		Electricity	Fuels		Total saving in (Rs.Lakh)	
		Lakh kwh	F.oil kl	Total fuel Mkcal		
2005-06	1)Three nos.pasteurizers milk pumps replaced from 7.5 hp to 5 hp.	0.3	----	----	1.10	0.60
	2) Hot condensate recovery at 50 °C of 30 TPD power plant. – The condensate from an evaporation plant of 30 TPD & 10 TPD powder Plant is collected & used as feed water to boiler, can washers.	---	54.53	520	9.61	19.48
	3) At chilling & process area, 25 double tube fittings having 40 watt copper choke replaced by energy saver electronic choke(50 nos.) Hence saving 10 watt per choke.	0.0365	---	---	0.127	0.08
	4) Voltage stabilizer connected for milk filling machines for constant voltage .Due to maintaining constant voltage ,current fluctuation on higher side is reduced.	0.037	---	---	0.13	0.6
	5)Power factor maintained at unity ,hence incentive given by MSEB.	---	---	---	12.80	Nil
	6) By fixing pvc strip Curtains to deep freeze ,milk cold room ,butter cold room & anti room door to avoid loss of temperature.	0.37	---	---	1.33	0.75
	TOTAL	1.072	54.536	520	25.097	21.51

Achievement of Energy Saving : 2006-07.

Year of Commissi-oning The Project.	Project Description	Achievement of energy saving per year basis				Investment Incurred on the project RsLakh
		Electricity	Fuels		Total saving in (Rs.Lakh)	
		[Lakhs kwh]	F.oil KL	Total (Fuel in MKcal		
2006-07	1) Installation of energy efficient pasteurizer with 93%regeneration efficiency pasteurizer.		21.6	194.85	4.44	12.00
	2) Cooling water pump(15hp) is removed by pipeline modification in 30 TPD Powder plant.	0.21	--	----	0.77	0.1
	3)Voltage stabilizer for new lighting panel	0.054	---	----	0.24	1.33
	4)Replacement of 250 watt SVL(15nos) by energy saver 120watt.	0.084	---	----	0.38	0.81
	5}Power Factor Maintained at Unity.	---	---	---	16.66	Nil
	TOTAL	0.348	21.6	195	22.49	14.24

Energy Conservation Achievements (2007-2008)

During the period between 2007-20087 "GOKUL" has implemented following proposals resulting to saving in electrical energy as well as thermal energy.

1) Condensate recovery from three circuit CIP system

- Heat available in condensate-4,24,0000al
- Saving of furnace oil by utilizing Condensate - 14965 kg/annum.
- Investment Rs. 0.05 Lakhs
- Saving in Rs.4.37 Lakhs/annum.

2) For C.B.M.M.,replaced 1 h.p.conventional dosing pump by single phase two nos of electronic dosing pumps.

- Saving in units–0.044 Lakhs Kwh/annum.
- Investment Rs.0.46 Lakhs
- Saving in Rs.0.20 Lakhs/annum.

3) At butter section ,for two nos. of C.B.M.M.,two nos. of butter milk pumps(2h.p.) replaced by one no of butter milk pump by placing one common butter milk tank for two CBMMs & done arrangement of level sensors in the tank. So that dry running of pumps is prohibhited & also saved electricity.

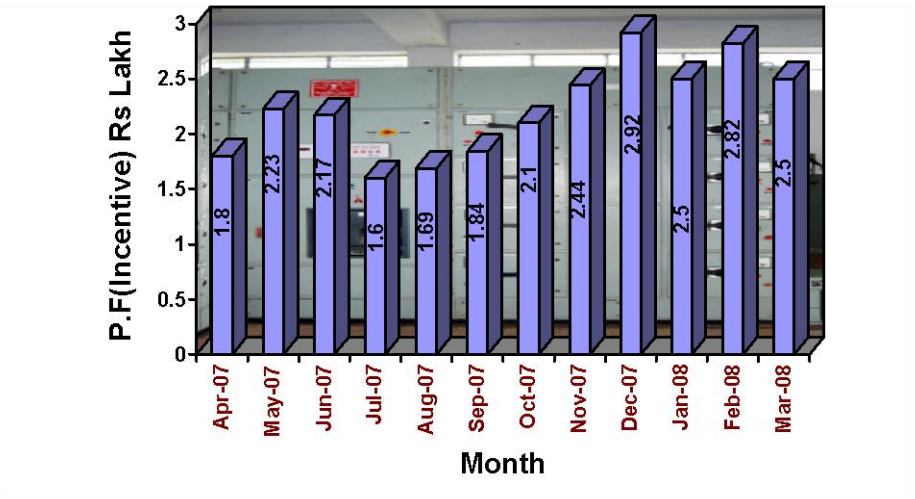
- Saving in units –0.068 Lakhs Kwh.
- Investment Rs. 0.1 Lakhs
- Saving in Rs. 0.3 Lakhs/annum

4) Ten nos. of S.V.L. replaced by energy saver street light.

- **Saving in units— 0.175Lakhs Kwh.**
- **Investment Rs. 0.6 Lakhs.**
- **Saving in Rs. 0.26 Lakhs/annum.**

Old SVL **New Energy Saver Street Light**

5) Power factor maintained at unity.
Hence we have achieved total saving Rs.26.66 Lakhs / annum.
Investment = Nil.



ENERGY CONSERVATION PLANS & TARGET:

Energy conservation Measures (planned)	Anticipated savings in		Approximat investment (Rs.Lakhs)	Project Commencement& Completion year
	A) Energy value	Rs.in Lakhs		
Installation of multifuel boiler.	10736.8 Mkcal	200	100	2010
Installation of mechanical type milk pouch packing machines	68437kwh	2.50	50	2008
Installation of energy efficient burners to boilers & air heaters	2412Mkcal	100	70	2009
Voltage stabilizer for old lighting panel	35770 kwh	1.87	0.90	2009
Installation of energy efficient pasteurizer with 93% regn. Efficiency	246Mkcal & 2.86Lakh Kwh	22.5	35.0	2008
Replacement of old conventional pump by new energy saver multistage pump	40150kwh	1.80	1.4	2008
Fanless induced draft cooling tower in refrigeration section.	525600kwh	18.92	12.00	2009
Condensate recovery from milk pasteurizers & Cream pasteurizers.	216 Mkcal	4.92	0.10	2008

Safety:

We have formed safety committee for safety awareness, monitoring & measurement.
Health check-ups of all employees are conducted regularly. We have conducted safety audit, hazzop &Risk assessment. Regular in house & outdoor trainings are provided to our employees.

Environment:

We are having 1400cu.m./day capacity effluent treatment plant, the treated water of which is used for gardening purpose. We are using Methane gas generated from U.A.S.B. for head office canteen. Environmental audits through certifying agencies were conducted & various environmental initiatives including environmental monitoring were implemented to maintain the ecological balance in & around the company premises. The requirements relating to various environmental legislations & environment protection were duly complied by the Company.