

# **MOTHER DAIRY, A UNIT OF KMF.**

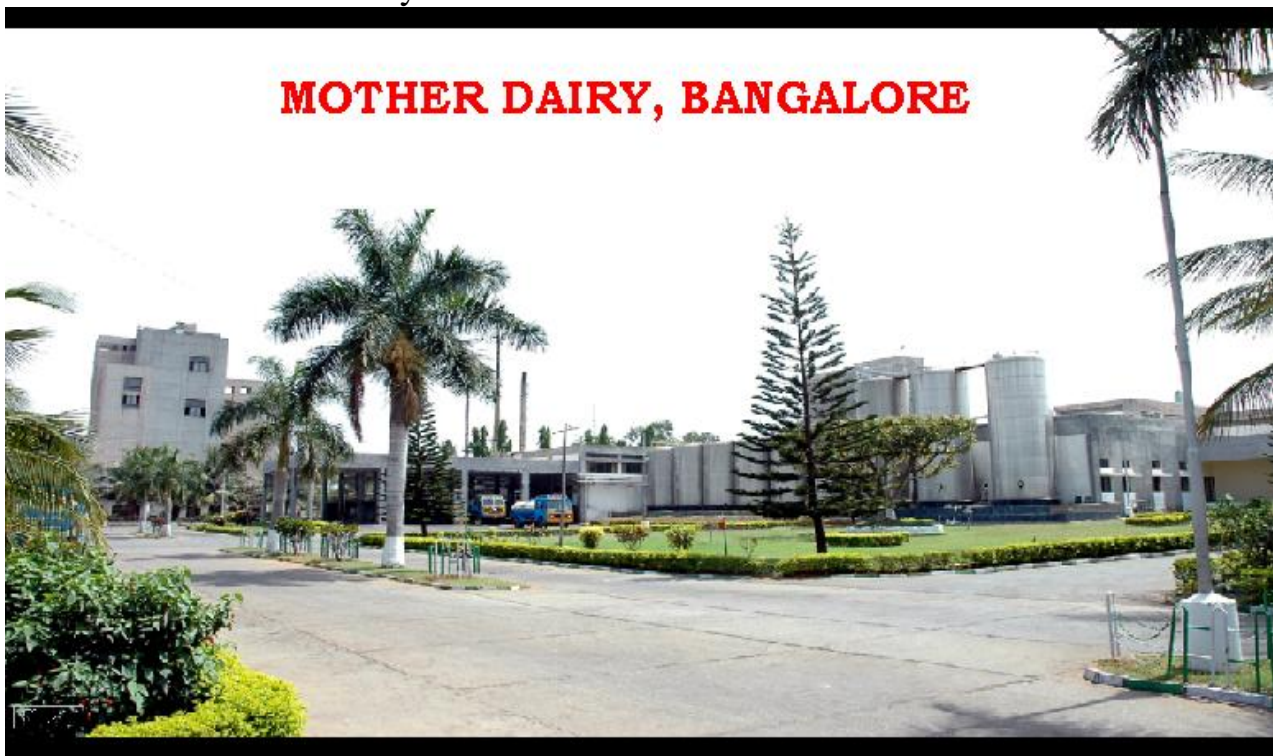
**G.K.V.K.POST, YELAHANKA, BANGALORE (KARNATAKA)**

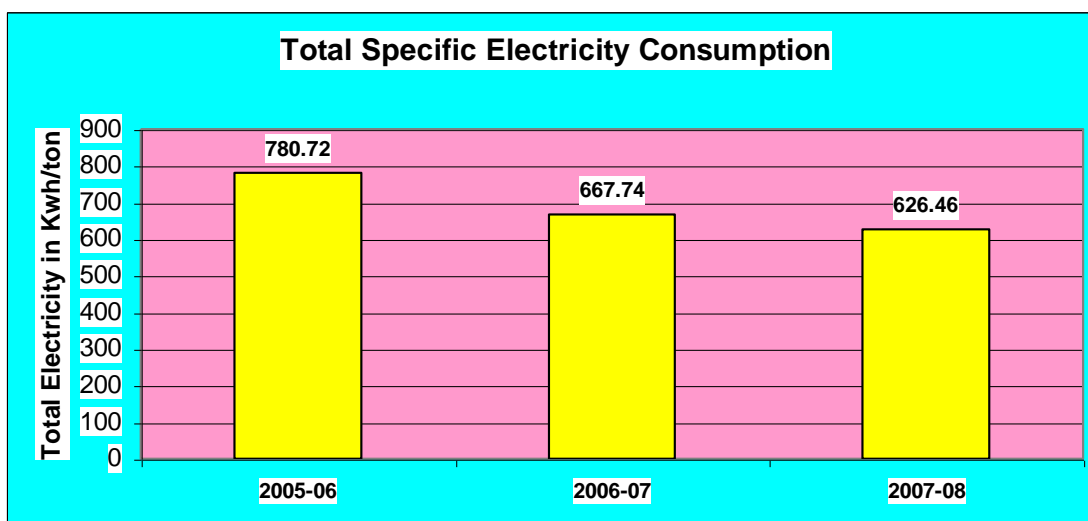
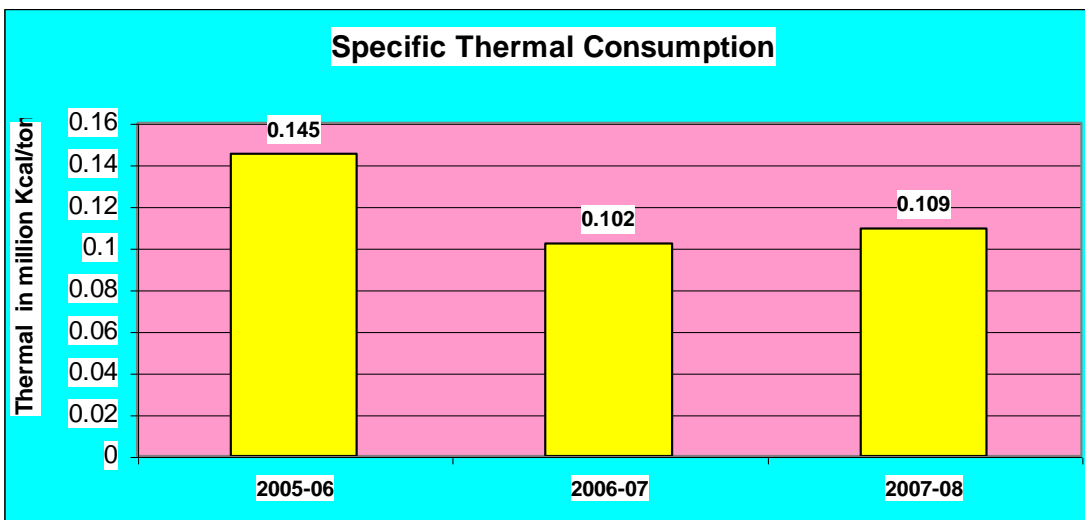
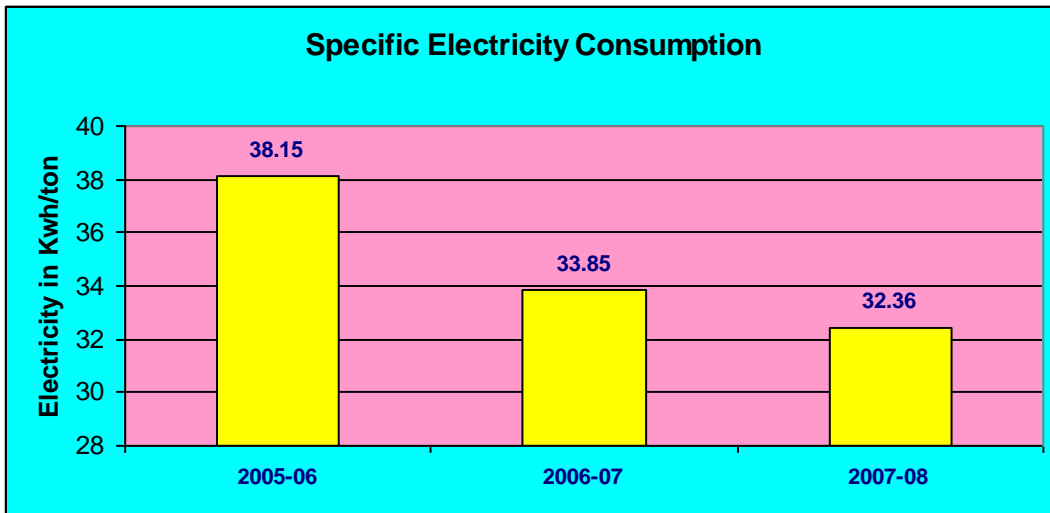
## **UNIT PROFILE**

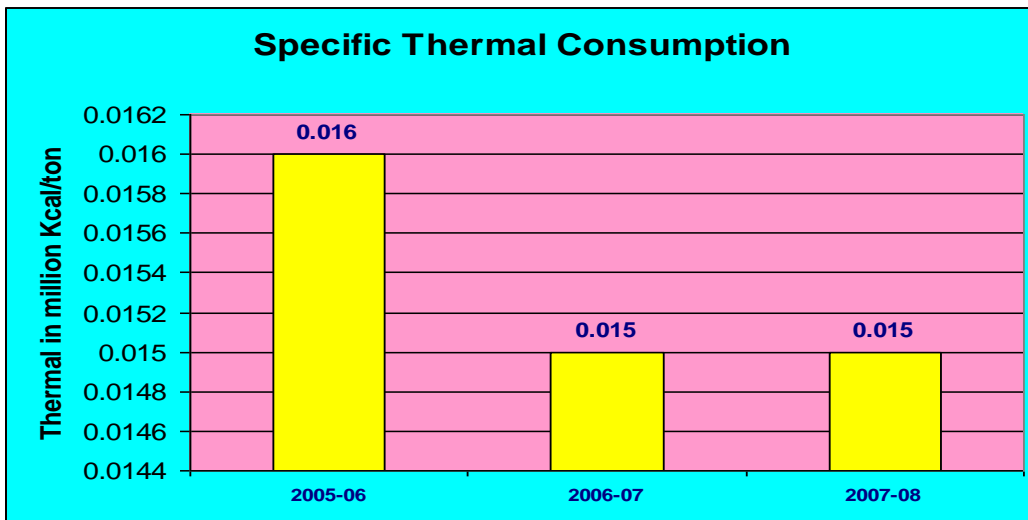
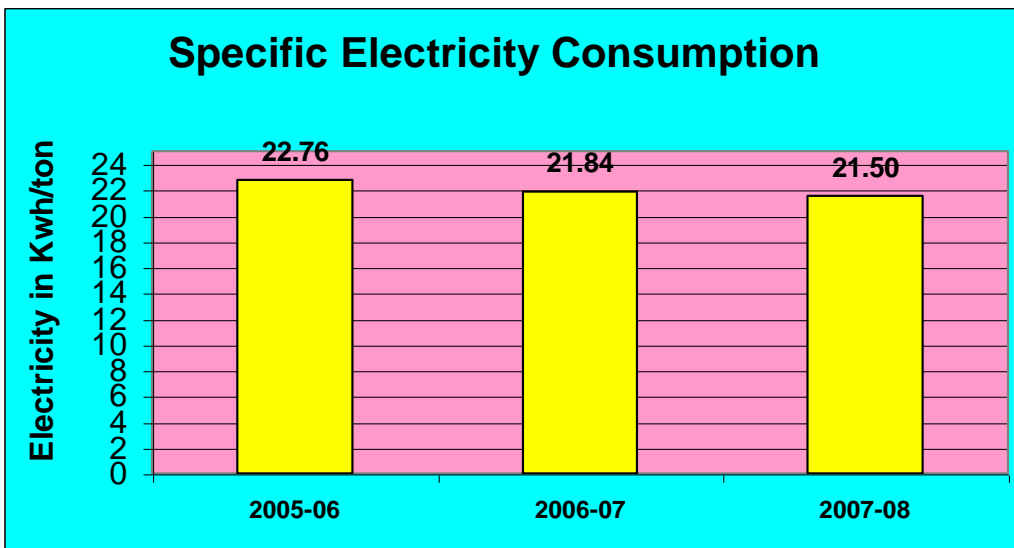
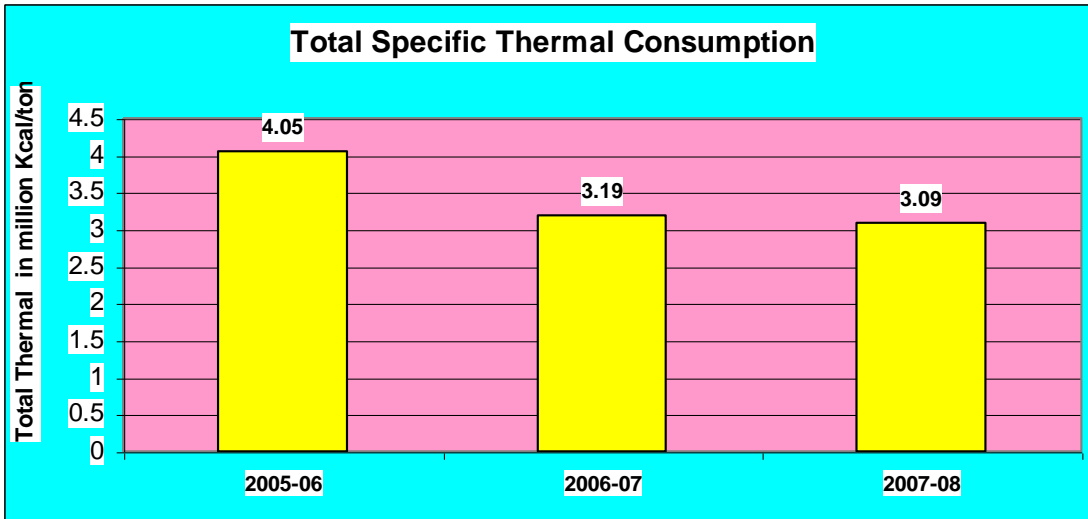
Mother Dairy primarily was established for dispensing of good quality of milk to the consumers at a very competitive cost and initially a capacity of 2 LLPD of plant was created to process and dispense milk. This is was followed by expansion to 4 LLPD, during which, dispensing of milk and milk variants to the consumers was introduced and presently the Dairy is getting expanded to process 7 LLPD and packing and dispensing of milk to the consumers for more than 3 LLPD, and dispensing Butter as well as Ghee to the consumers in retail packs as well as bulk.

A Plant to convert 3 LLPD milk into Skimmed Milk Powder, Whole Milk Powder and Dairy Whitener is also in operation and the products manufactured at Mother Dairy are of international quality.

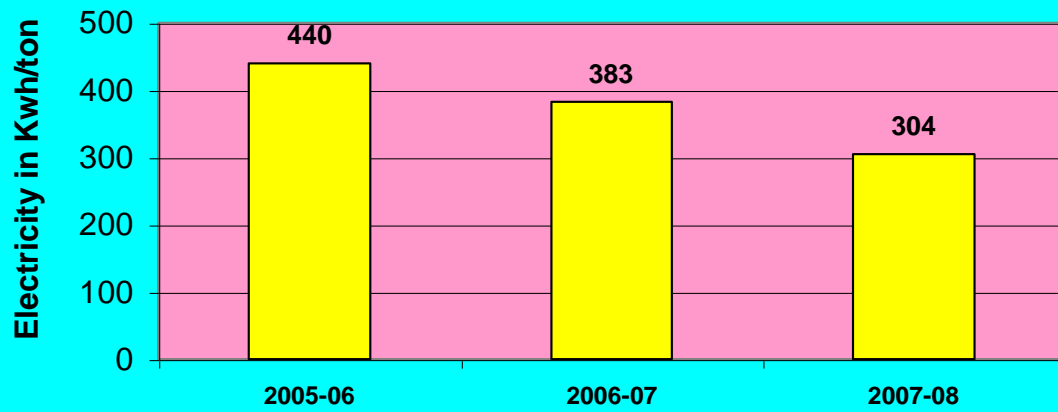
Also Mother Dairy has an Ice Cream Plant which is producing more than 20 varieties of Ice Creams a day and having an installed capacity of 10,000 ltrs per day. In order to fulfill the ever increasing demand for milk products in excess of 50SKUs in new pack formats are introduced in Mother dairy.



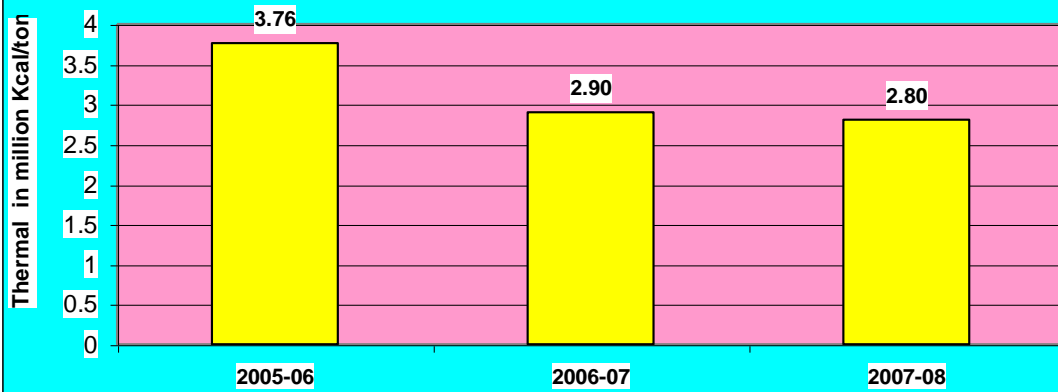




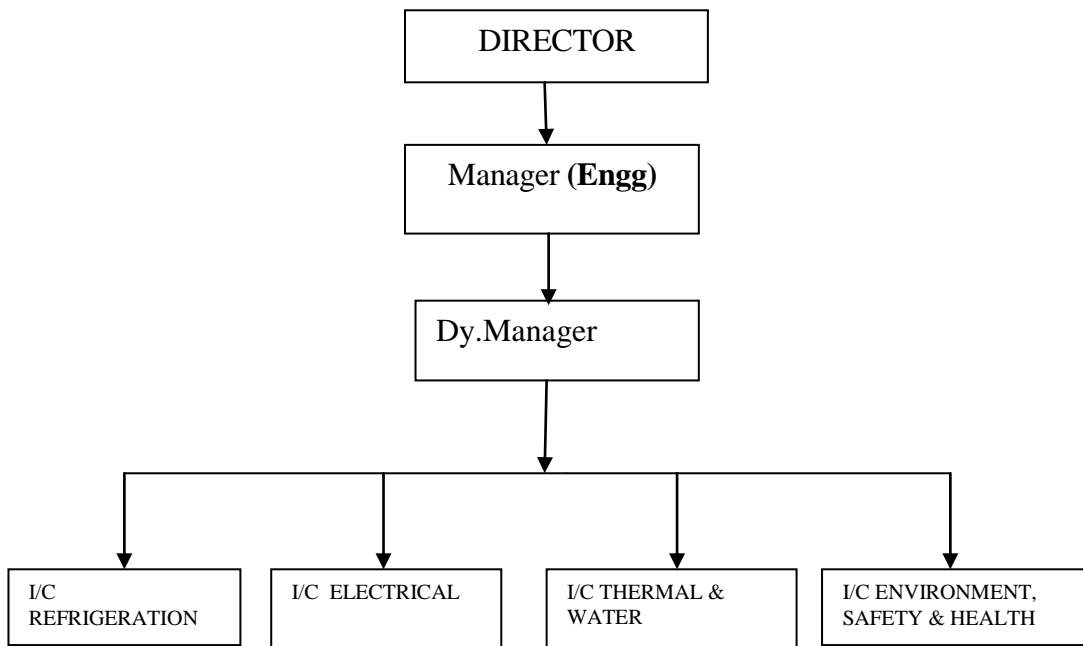
## Specific Electricity Consumption



## Specific Thermal Consumption



## ENERGY CONSERVATION CELL STRUCTURE



## Energy Conservation Achievements 2007-08

Sl · No	Particular	Achievement of energy saving /year basis					Total saving in Lakhs	Investment Rs. In Lakhs
		Fuels						
		Electr icity Lkwh	Coal In tone	F.O. in KL	Gas in Lm <sup>3</sup>	Total fuel in MKcal		
1	Recovering the condensate water from process equipment at 80°c and reuse it for boiler feed water.			36.00		367.20	10.00	2.50
2	Installation of energy efficient lights at Packing & refrigeration sections.	0.9					0.44	0.36
3	Installing new pressure reducing valves at different plant in processing section.			17.85		182.07	5.00	0.50
4	Thawing of every batch of butter before melting			1.71		17.52	0.48	0.0
	<b>TOTAL</b>	<b>0.9</b>		<b>55.56</b>		<b>566.79</b>	<b>16.02</b>	<b>3.36</b>

**1. Recovering the condensate water from process equipment at 80°c and reuse it for boiler feed water:**



Temperature of condensate being drained	= 80 deg C
Temperature of feed water	= 30 deg C
Heat gain	= 80-50=50kcal/kg
Average condensate load	= 1000kg/hr
Total heat gain	= 1000*50 = 50000kcal/hr
Calorific value of fuel	= 10200kcal/kg
Fuel saving	= 5.00kg/hr
No. Of working hours/year	= 360days*20hr/day = 7200hrs
Fuel savings /year	= 7200hr*5.00kg/hr = 36000kg
Total Amount savings/year	= 36000kg*Rs.28.00/kg = Rs.10.00 Lakh
Investment	= Rs. 2.5lakh
Payback period	= 3 Months

## 2. Installation of energy efficient lights at Packing & refrigeration sections:



Power savings in units/year = 8800kwh

Total Amount savings/year = 8800units\*Rs.5/unit

= Rs. 0.44lakh

Investment = 0.36lakh

Payback period = 10 Months

**3. Installing new pressure reducing valves at different plant in processing section:**



Amount of steam to milk processing plant = 900kg/hr

At high pressure distribution, ideal loss will be 3% = 27kg/hr

Amount of steam loss = 14kg/hr

F, oil savings in kg/year =  $(27/11) \times 20 \times 360$   
= 17800Kg

Total Amount savings/year = 17800\*28  
= Rs. 5.0 lakh

Investment = 0.5 lakh

Payback period = 1 1/2 months