

Mother Dairy, Gandhinagar (MDG)

UNIT PROFILE

Mother Dairy, Gandhinagar (MDG) is a unit of Gujarat Cooperative Milk Marketing Federation (GCMMF) Ltd., which markets its products under AMUL & SAGAR brand. The plant was set-up at Gandhinagar with a strategic intent of catering to requirement of fresh and wholesome milk of consumers of Ahmedabad and nearby cities and to handle every drop of surplus milk from member dairies of Gujarat and hence play a role of Mother. The most modern, PLC based automated dairy processing plant with in-built capability to produce milk products matching to the best quality standards was set-up in the year 1994 with a capacity to handle 10 lac litre of milk per day.

MDG was commissioned in September 1994 by L&T with assistance of APV-Denmark, Westfalia-Germany, Niro-Sweden and Nu-con -New Zealand. The dairy initially had Liquid Milk, Pouch Filling, Butter Oil plant & Milk Powder Plant. To keep pace with changing time Ice Cream plant, UHT plant, Pouch filling Expansion Project and Mozzarella Cheese plant were installed subsequently. Recently, the milk processing capacity has been increased from 10 LLPD to 18 LLPD.

It is estimated that in the year 2010, MDG would receive 35 LLPD of milk. To meet this requirement, we are expanding our milk handling capacity by installing 100 MTPD milk powder plant as a 1st phase of expansion for which work has already been started and would be completed in the period of next 04 months. The plant would be of state of the art in terms of civil structural engineering and most modern process technology and automation. In the 2nd phase, we will have another 20 LLPD milk processing line and butter processing and packing facilities. In the 3rd phase of expansion, there would be another 100 MTPD milk powder plant.

The vast and varied product portfolio includes Market Milk, Ghee, Milk powders, Ice Cream, UHT milk and milk products and Cheese. The other product portfolios apart from milk and milk products are Soup, Kadhi and Pizza.

The plant is professionally managed and has adopted world-class quality management systems and quality initiatives like ISO 9001-2000, HACCP 9001-2000, ISO 14001, Total Productivity Maintenance, Six Sigma, Total Energy Management, Energy Management System etc.

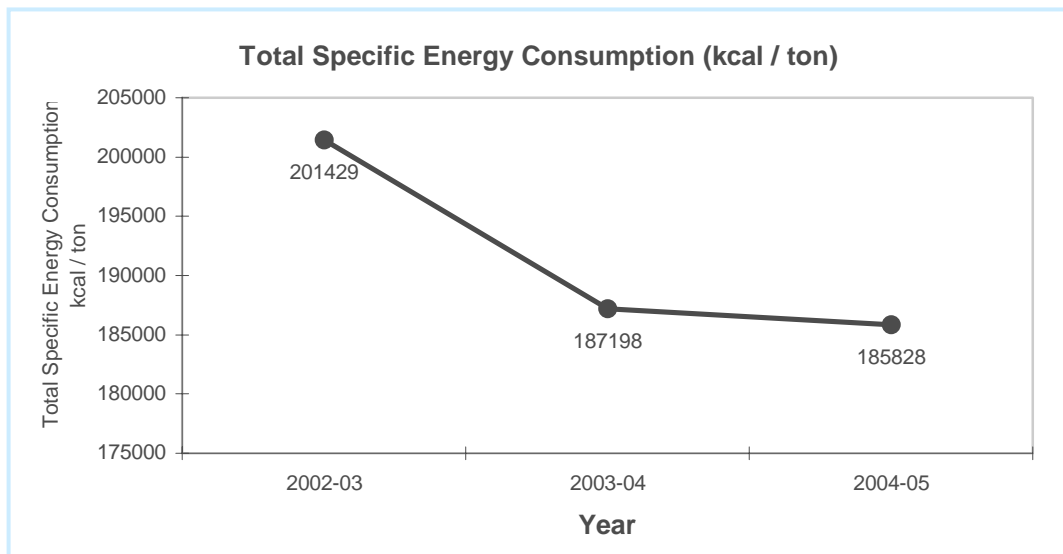
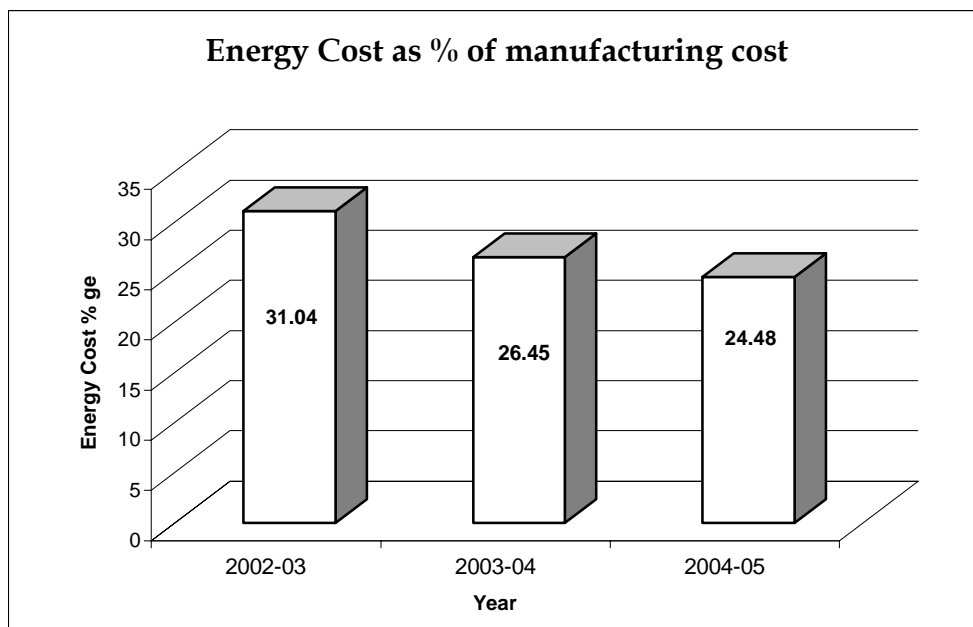
Mother Dairy being a unit of GCMMF Ltd., all the financial figures are merged with the balance sheet of the latter. The sales turnover of GCMMF Ltd. for 2004-2005 was Rs. 2922.53 crores.

ENERGY CONSUMPTION

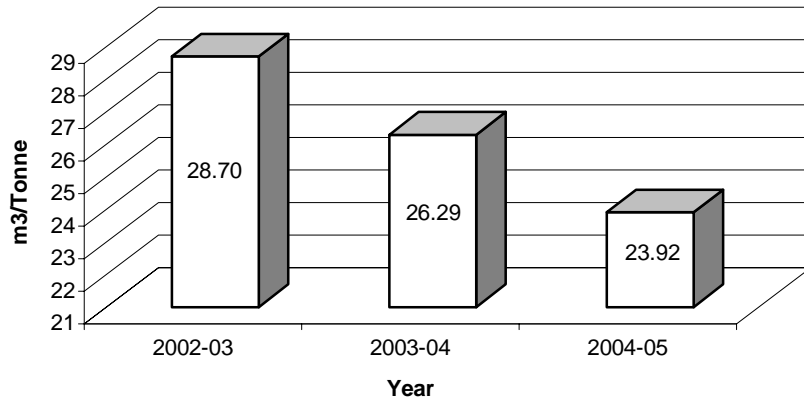
We at MDG are very focused about controlling our manufacturing cost. One of the major means is through energy conservation. There is a steady decline in specific energy consumption due to various energy conservation initiatives undertaken through TOTAL ENERGY MANAGEMENT SYSTEM. The energy scenario of MDG in the past three years is given below.

DESCRIPTION	UNIT	2002-03	2003-04	2004-05
Annual Milk Handled	MT	345579	302907	363270
Total Electrical Energy Consumption	Lakh KWh	180.90	172.8	192.6
Specific Energy Consumption - Electrical	Lakh KWh/MT	0.0005234	0.0005704	0.0005301
Total Thermal Energy Consumption	Million Kcal	52634	41846	50875

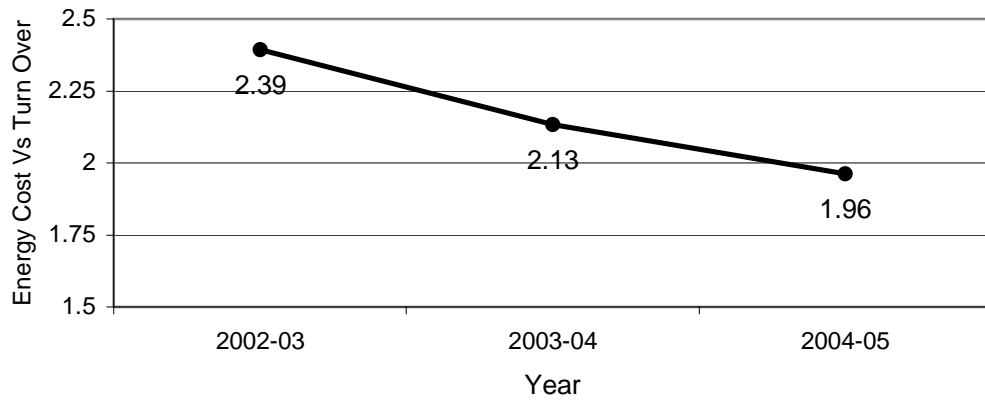
Specific Energy Consumption - Thermal	Million Kcal/MT	0.1523	0.1381	0.1400
Total Manufacturing Cost	Rs. crore	44.26	45.98	58.63
Total Energy Cost	Rs. crore	13.74	12.16	14.35
Energy Cost as % of Total Manufacturing Cost	%	31.0	26.4	24.5



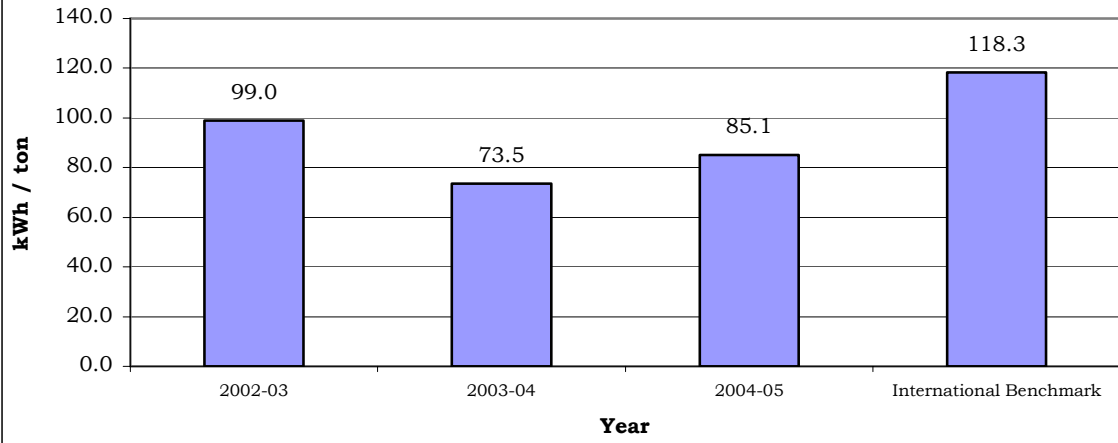
**Specific Air Consumption for Milk Reception
(m³/Tonne)**



Energy Cost as % of Turn Over



Mother Dairy Liquid Milk Specific Energy Consumption



ENERGY CONSERVATION COMMITMENT, POLICY AND SET UP

MDG is committed to energy conservation at its premises. This is demonstrated by adopting TOTAL ENERGY MANAGEMENT (TEM) SYSTEM, our Energy Conservation Policy and the well structured Energy Management Cell. We have been using the best technology in the world in dairy processing and are committed to Reduce/Prevent energy wastage, Reuse it to the possible extent without affecting product quality and 0

The Energy Conservation Policy of MDG is:



MOTHER DAIRY, GANDHINAGAR ENERGY POLICY

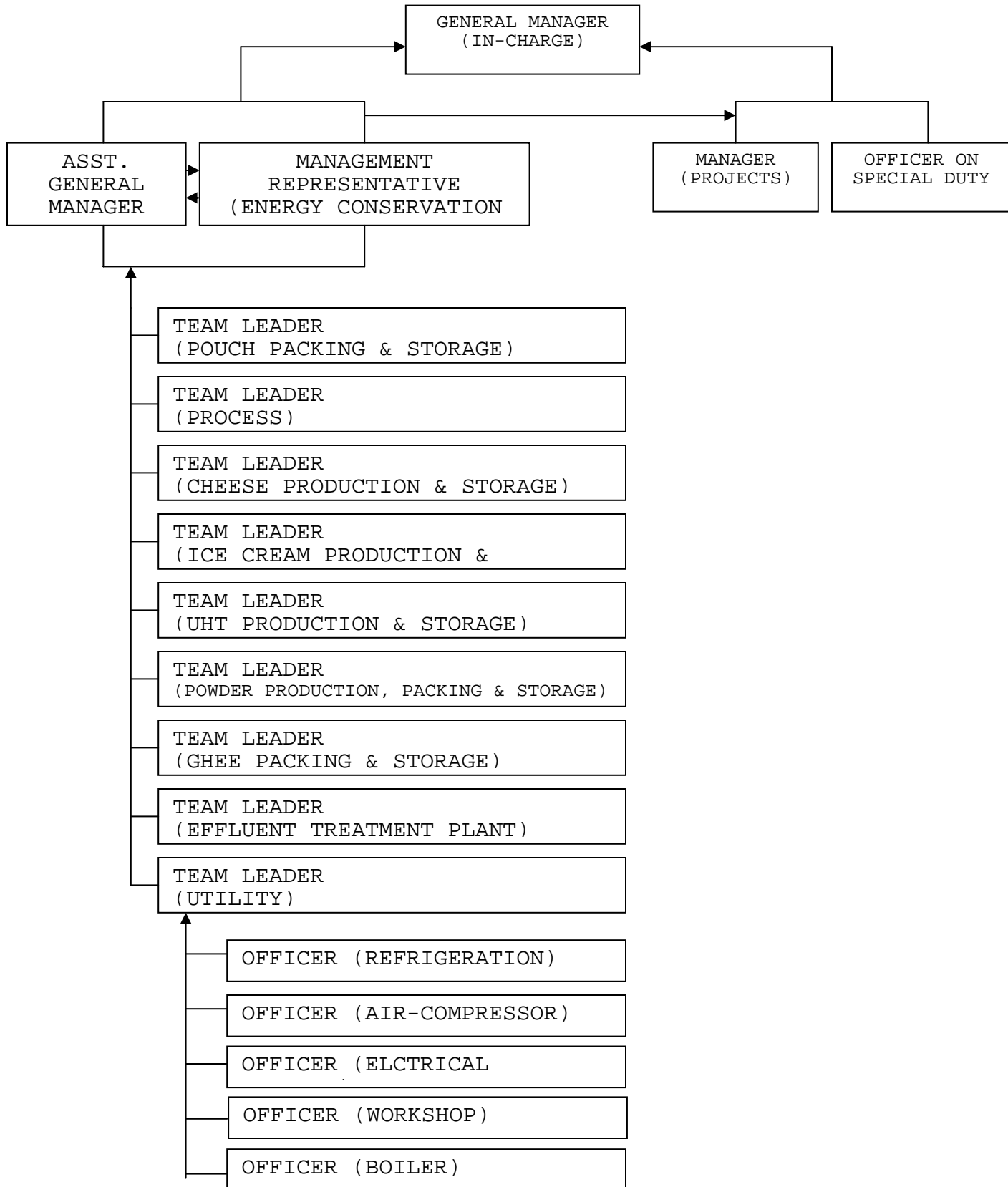
We, at Mother Dairy, Gandhinagar, are committed to optimally utilize various forms of Energy in a cost-effective manner to affect Conservation of Energy.

To accomplish this, we will:

- Monitor closely the consumption of Energy through an effective Total Energy Management System.
- Benchmark continuously our performance against the best in the world.
- Adopt Latest and Eco-friendly Technologies to minimize the waste and protect environment without compromising on product quality.
- Make Energy Conservation a mass movement with the involvement of all Employees by creating awareness and training them.
- Promote Reuse and Recycle of possible energy resources.
- Carry out regular Internal and External audits to identify areas for improvement.
- Enrich our experience on energy conservation by exchange of ideas with other industries/agencies.

The structure of TOTAL ENERGY MANAGEMENT TEAM is shown below.

ENERGY CONSERVATION CELL (TEM Team) AT MDG



ENERGY CONSERVATION ACHIEVEMENTS

During the period 2002-2005 MDG implemented various energy saving proposals generated through external energy audit and in-house suggestions. Total saving of Rs. 148.59 lakhs was achieved with an investment of Rs. 99.58 lakhs with a payback period of 8.4 months.

There is has increase of 1.34% in specific thermal energy consumption during 2004-05 over the year 2003-04. This is attributed to shorter production runs and varies product mix consuming high thermal energy.

But there is decline in specific electrical energy consumption in 2004-05 over 2003-04 by about 7.07% due to energy conservation measures taken up during the year.

MDG has grabbed silver ENFUSE AWARD 2003 (Energy & Fuels Users Association, Chennai) in the category of more than 2000 KVA energy users for the energy efficiency excellence.

Mother Dairy, Gandhinagar is one of the 38 top Energy Efficient Unit in India, selected to make presentation at this year's CII –Sohrabji Godrej Green Business Center, National Award For "Excellence In Energy Management-2005"