

GENERAL MOTORS Halol, Panchmahal (Gujarat)

Unit Profile

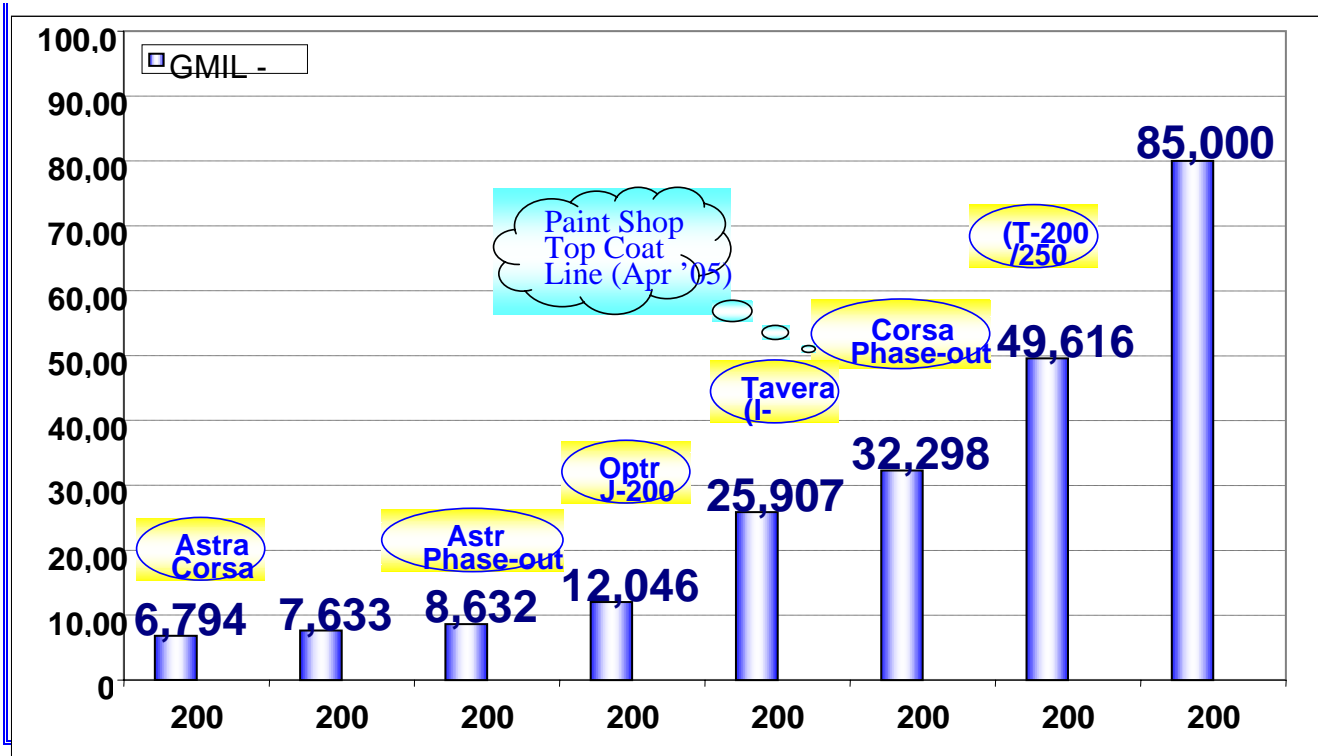
General Motors Corp. (NYSE: GM), the world's largest automaker, has been the annual global industry sales leader for 76 years. Founded in 1908, GM today employs about 280,000 people around the world. With global headquarters in Detroit, GM manufactures its cars and trucks in 33 countries. In 2006, nearly 9.1 million GM cars and trucks were sold globally under the following brands: Buick, Cadillac, Chevrolet, GMC, GM Daewoo, Holden, HUMMER, Opel, Pontiac, Saab, Saturn and Vauxhall. GM's OnStar subsidiary is the industry leader in vehicle safety, security and information services. General Motor Worldwide turnover more than \$USD 185 billion annually.



Safety is a overriding priority in General Motors. GM-India is committed to promote energy efficient activities, safety, environmental protection and social welfare. GM-India is presently establishing a vehicle assembly unit in Pune. All

the energy conservation ideas are captured in the design stage itself to make the facility as the most & best energy efficient facility in India and in the world as well..

GMI – Production Volumes

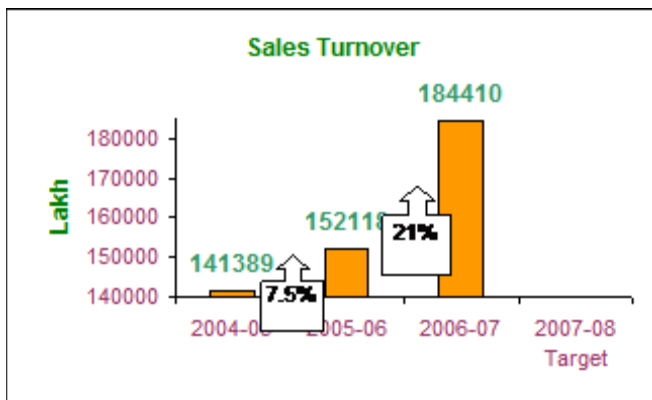
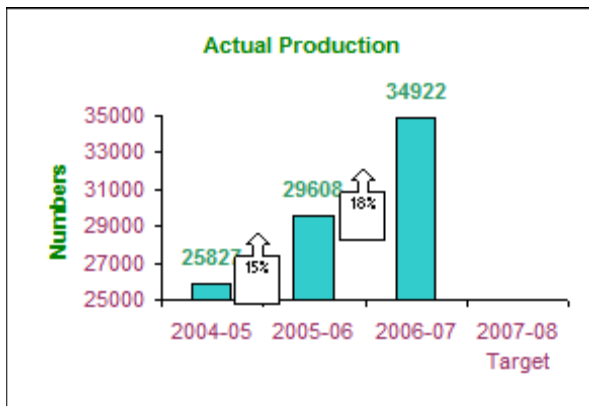


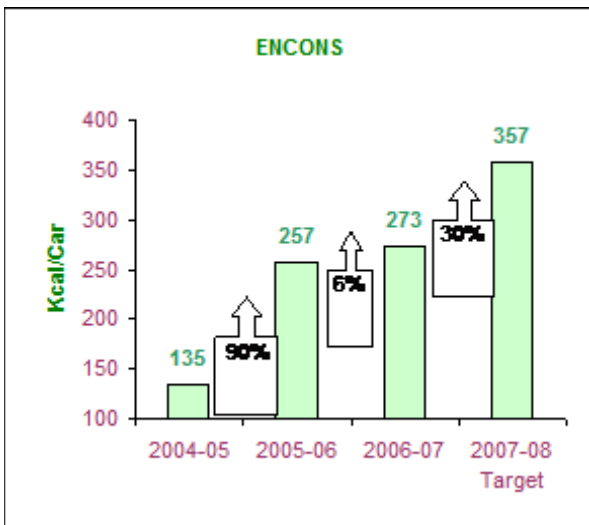
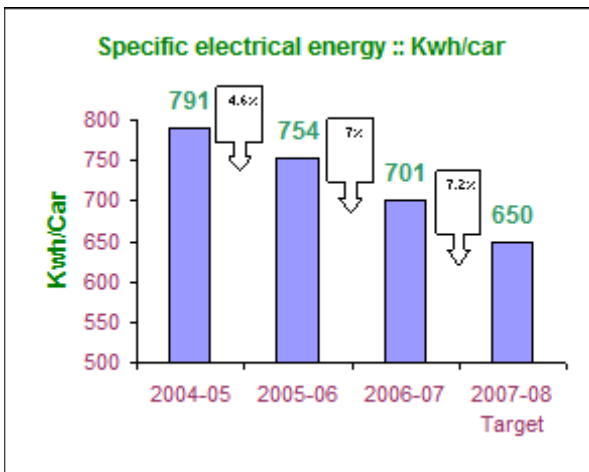
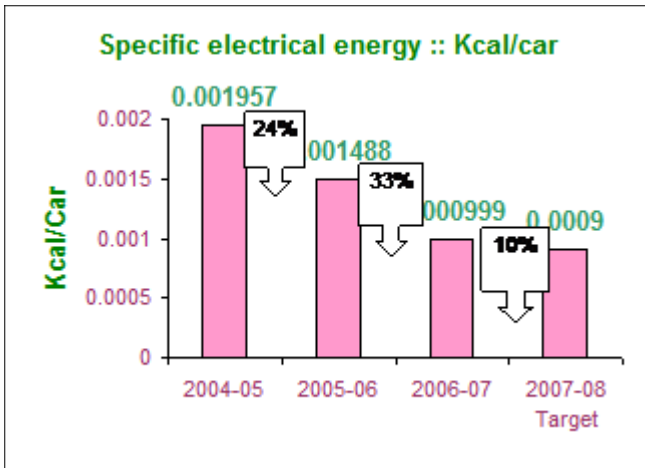
Energy Consumption

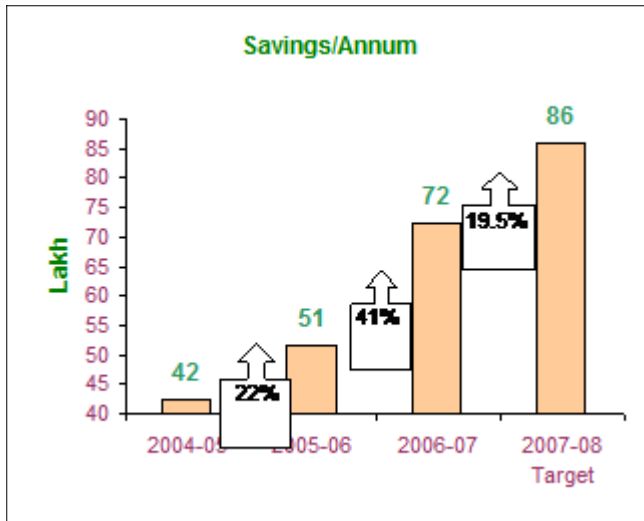
Description	Unit	2004	2005	2006
Annual equivalent vehicles produced	No's	25827	29608	34922
Total Electrical energy consumption per annum	Lakh kWh	204	223	245
Specific electrical energy consumption	kWh/ car	791	754	701
Total thermal (Fuel) consumption per annum	Lakh M ³	0.032	0.028	0.022
Million K Cals/ annum		50.54	44.06	34.90
Specific thermal energy consumption per annum		0.002	0.00149	0.001
Million K Cals/car				

Energy Conservation achievements

Performance Trends







Some of the energy conservation projects implemented in the plant are as given below:

Project 1

Maintain the temperature of ELPO bath using Main cooling tower water directly. This eliminates running of ELPO chiller for cooling ELPO paint.

Annual Savings :Rs. 8.38 Lakhs
Investments : Rs. 0.3 Lakhs



Project 2

Operate Body Shop lights at reduced voltage by diverting the source of lighting to Centralized Voltage Controller. This saves energy without significantly affecting the lux level.

Annual Savings : Rs. 4.47 Lakhs

Investments : Rs. 0.3 Lakhs

Intangible benefits : Tube lights failures reduced.



Project 3

At Cavity wax station (S & J), there were two pneumatic stirrers, one in supply drum and one in storage drum. After discussions with Production it was concluded that stirrer for supply drum is required only at time of loading and needs to be run only for about 30 minutes. Stirrer was switched off and locked. It is now used only when required.

Annual Savings : 3.13 Lakhs

Investments : Nil



Project 4

Installation of Automatic Voltage Controller for New Top Line and operate lights at reduced Voltage.

Annual Savings : 3.33 Lakhs

Investments : 3.5 Lakhs



Project 5

Compressed air was utilized for continuous stirring action in Brine solution tank. Analysis showed that continuous stirring is not required for Brine solution as it is a water saturated salt. Automation provided so as to switch off the compressed air after an hour of usage.

Annual Savings : Rs.20 Lakhs

Investments : Rs.1.0 Lakhs



Environments and Safety

As a responsible corporate citizen, General Motors India (GMI), Halol is committed to protecting human health, conserving natural resources and preserving the environment in accordance with the environmental principles of General Motors Corporation. This dedication integrates sound environmental practices into its decisions making.