

## Maruti Udyog Limited Gurgaon

### Unit Profile

Maruti Udyog Ltd. (Maruti) was established as a Government Company in February 1981, with the objective of modernization of Indian automobile industry and production of fuel-efficient vehicles in large numbers, necessary for economic growth. Since then the Government of India in phased manner have offered its equity to SMC, Public and FIs. The new equity holding is : SMC 54.2%, Public & Financial Institutions 27.5%, Government of India 18.3%.

Maruti, a socially conscious and a responsible corporate citizen, is the market leader in the domestic car market since Dec 1983. The passenger cars made in India are also exported to over 100 countries around the world. Maruti has revolutionized the Indian automobile and component industry, and has set standards in quality of products and services.

The existing capacity of Maruti is 6,00,000 units per year and the company employs nearly 3500 employees. Maruti produced its first vehicle in December 1983, and in a short span of 22 years produced more than 5 million vehicles. The turnover of Maruti Udyog Limited is around Rs 11000 Crore.

The company has a portfolio of 11 products, including the Maruti 800, Omni, premium small car Zen, international brands Swift, Alto and Wagon-R, off-roader Gypsy, the mid sized Esteem, luxury car Baleno, Estate Altura and India's first MPV, Versa.

Maruti became the first passenger Car Company in India to obtain ISO-14001 certification, in November 1999.

The Maruti family comprises of:

- A network of vendors for the bought out parts and consumables
- A Sales & Service network comprising dealers, sales outlets, MASS (Maruti Authorized Service Stations) is spread all over the country.
- A Transport network, for transporting finished vehicle to dealerships.

The company is also into related service areas including pre owned cars, lease and fleet management for corporate, Auto finance and Auto insurance businesses.

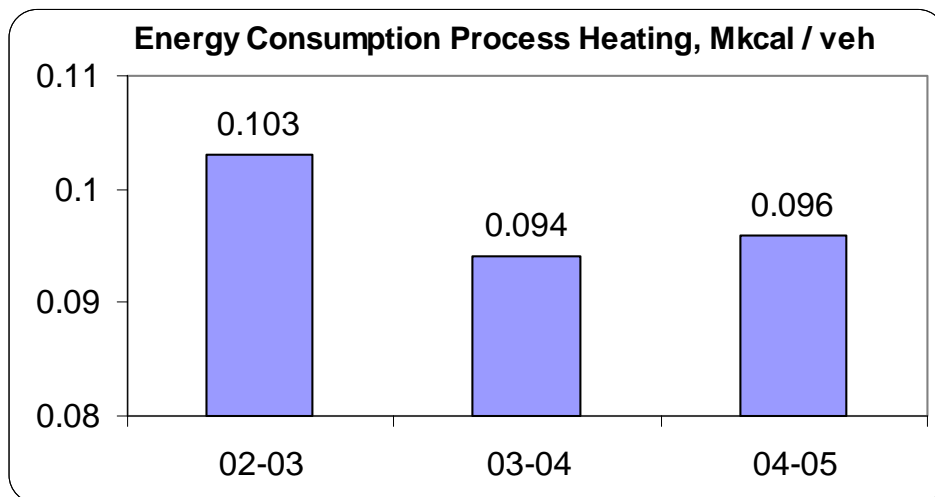
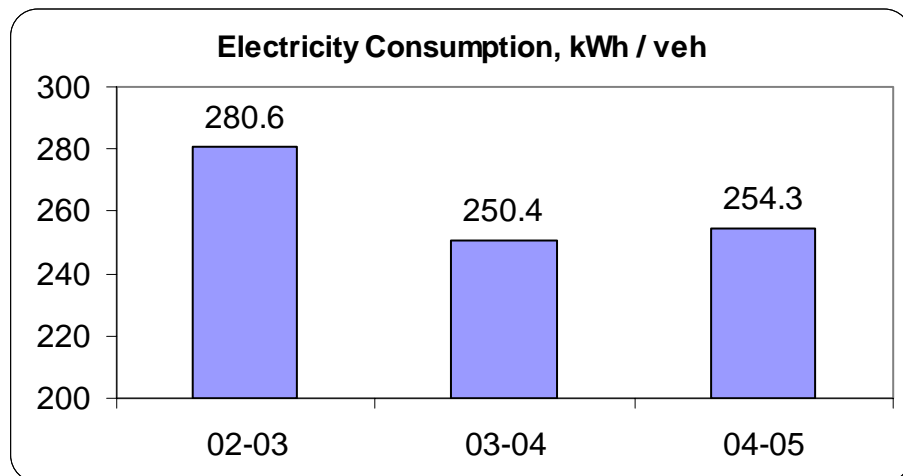
### Energy Consumption

There has been continuous reduction in Electrical and Thermal Energy Consumption per vehicle because of implementation of various energy conservation measures.

Description	Unit	2002-03	2003-04	2004-05
Vehicle Production	Nos.	359960	472908	540409
Electrical Energy Consumption	Lakh Kwh	1010.05	1184.04	1374.26
Specific Electrical Energy Consumption	Kwh/veh	280.6	250.4	254.3
Thermal Energy Consumption	MKCal	36930	44378	51906
Specific Thermal Energy Consumption	MKCal/veh	0.103	0.094	0.096

Year	Electricity		Thermal	
	kWh/vehicle	% reduction over 2002-2003	MkCal/vehicle	% Reduction over 2002-2003
2002-2003	280.6	--	0.103	--
2003-2004	250.4	10.76%	0.094	8.37%
2004-2005	254.3	9.37%	0.096	6.80%

### Specific Energy Consumption



### **Energy Conservation Commitment, Policy & Set up**

Maruti Udyog Limited has full commitment for energy conservation. Every employee of MUL understands the importance of energy conservation and works towards it through suggestion scheme. Further exclusive budgetary provision is made for projects relating to energy conservation.

The top management does monthly review of energy consumption and various issues related to energy conservation are discussed in this meeting.

### **Energy Management Policy**

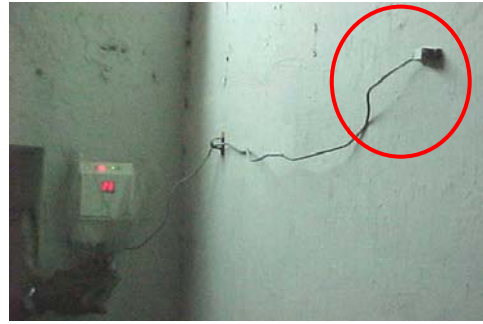
- Set targets for energy saving and resource conservation
- Set well laid down procedures for various functional areas for resource conservation
- Create awareness amongst employees and encourage them to give suggestions. Use QC meetings for this purpose
- Continuously monitor and give feedback on energy consumption trend
- Use of non-conventional / natural sources of energy

## Energy Saving Initiatives-2004-05

### 1) Air washer pump auto operation

Automatic switching on / off the water pump of air washers by using temperature controller. It senses the ambient temperature and switches off the pump at 28°C and switches on the pump at 30°C ambient temperature.

Total Electricity Saving: 88000 Kwh per annum  
Total Cost Saving: Rs 3.98 lacs per annum  
Total Investment : Rs 75000



### 2) Lighting modification

Replacing 150 watt / 250 watt street light lamps by 38watt x 2 nos CFL by reducing pole height and uniform light distribution for the area between the production shops.

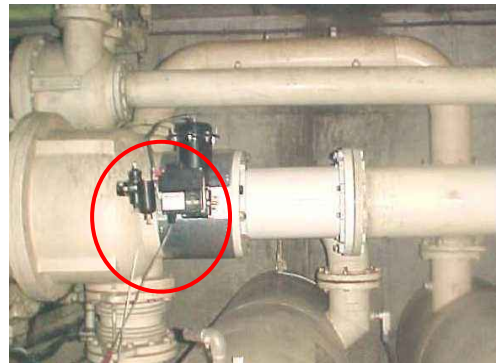
Total Electricity Saving: 68000 Kwh per annum  
Total Cost Saving: Rs 3.12 lacs per annum  
Total Investment : Rs 7.65 lacs



### 3) IGV in centrifugal compressor

Inlet Guide Veins are provided at the centrifugal compressor inlet to control the air flow as per requirement. Because of these IGVs, the air assists the impeller to rotate thereby reduces the power consumption in unload condition of compressor.

Total Electricity Saving: 392000 Kwh per annum  
Total Cost Saving: Rs 17.72 lacs per annum  
Total Investment : Rs 15.23 lacs



### 4) ETP Modification :

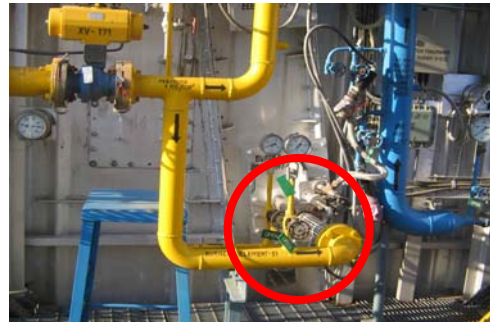
In Effluent treatment plant, the aeration blower has been linked with actual measurement of Dissolved Oxygen (DO) in the aeration tank. This has resulted in reduced power consumption in aeration process.

Total Electricity Saving: 162000 Kwh per annum  
Total Cost Saving: Rs 7.32 lacs per annum



**5) Increased use of Flue gas for Steam generation**

Additional heating provided to flue gas of Gas Turbine by providing additional burner in Waste Heat Recovery Boiler. This has resulted in saving of fuel used for producing steam in fire tube boilers.



Total Fuel saving: 1.10 lacs m3 gas per annum  
 Total Cost Saving: Rs 8.60 lacs per annum  
 Total Investment : Rs 172.80 lacs

**6) Fuel saver in Paint Shop oven**

Fuel saver device creates a magnetic field which charges the gas particles. This in turn improves the burning efficiency in the burner, thereby reducing the gas consumption.



Total Fuel Saving: 0.28 lacs m3 gas per annum  
 Total Cost Saving: Rs 2.20 lacs per annum  
 Total Investment : Rs 2.10 lacs

**Energy Conservation Plans (2005-06)**

Energy Conservation Measures (Planned)	Anticipated savings		Approx. investment (Rs.lakhs)	Project Commencement & Completion year
	Energy Value	Rs. Lakhs		
Inlet fogging in GT	6.54 lacs m3 gas	51.01	71.70	2005-06
Steam Compressor	32.26 lacs kWh	134.52	307.00	2005-06
Air dryer modification	1.39 lacs kWh	5.80	15.00	2005-06
Air cooled condenser	8.00 lacs kWh	33.36	70.00	2005-06
Energy efficient lighting	0.42 lakh kWh	1.75	2.68	2005-06