

BAJAJ AUTO LIMITED (Aurangabad Division) WALUJ

Unit Profile:

Bajaj auto limited, Waluj, Aurangabad, is a division of Bajaj Auto Limited, Pune, a flagship company of Bajaj Group. Bajaj Group was formed by Mr. Jamanalal Bajaj in 1929. Bajaj Auto Limited, Pune started scooter production in 1960. As an expansion plan, Bajaj Auto Limited, Waluj Plant is started in 1985. In 1999, a State of Art Plant was started at Chakan.

Objectives of Bajaj Auto Limited are to cater the market needs of transportation by providing 2 wheeler and 3 wheeler vehicles. BALW has been producing the catalogue products to cater to the changing market requirements. Based on the customer feedback, improvements are being made continuously in the existing products. In the process of introducing new products, emission requirements are being taken into consideration and products manufactured are meeting the regulatory requirements.

The site of BAL-W is located in MIDC Waluj area.

Bajaj Auto Limited, is an ISO-9001 company, having ISO-9001 (2000) Quality Management certification.

A constant watch is kept on the technological developments taking place in the areas of energy reduction, waste reduction and pollution prevention. Environment Management System is integral part of overall management systems at BALW. ISO 14001 certification was awarded to BAL-W in 1997 & OHSAS 18001-1999 Awarded to the unit in Year 2007.

Bajaj Auto has resolutely engaged in a process of fundamental change. This has involved changes in the organizational structure; in product and models; in the approach to markets and consumer preferences, in R&D engineering, product design and speed to market; in rationalizing of cost; and in a complete overhaul of the way in which Bajaj Auto do business. This change process is now optimized by Bajaj Auto's new corporate identity.

SHE Policy and TPM Policy are guidelines for our working. Photographs of the same are attached. (For readability, the said policies are reproduced as it is).

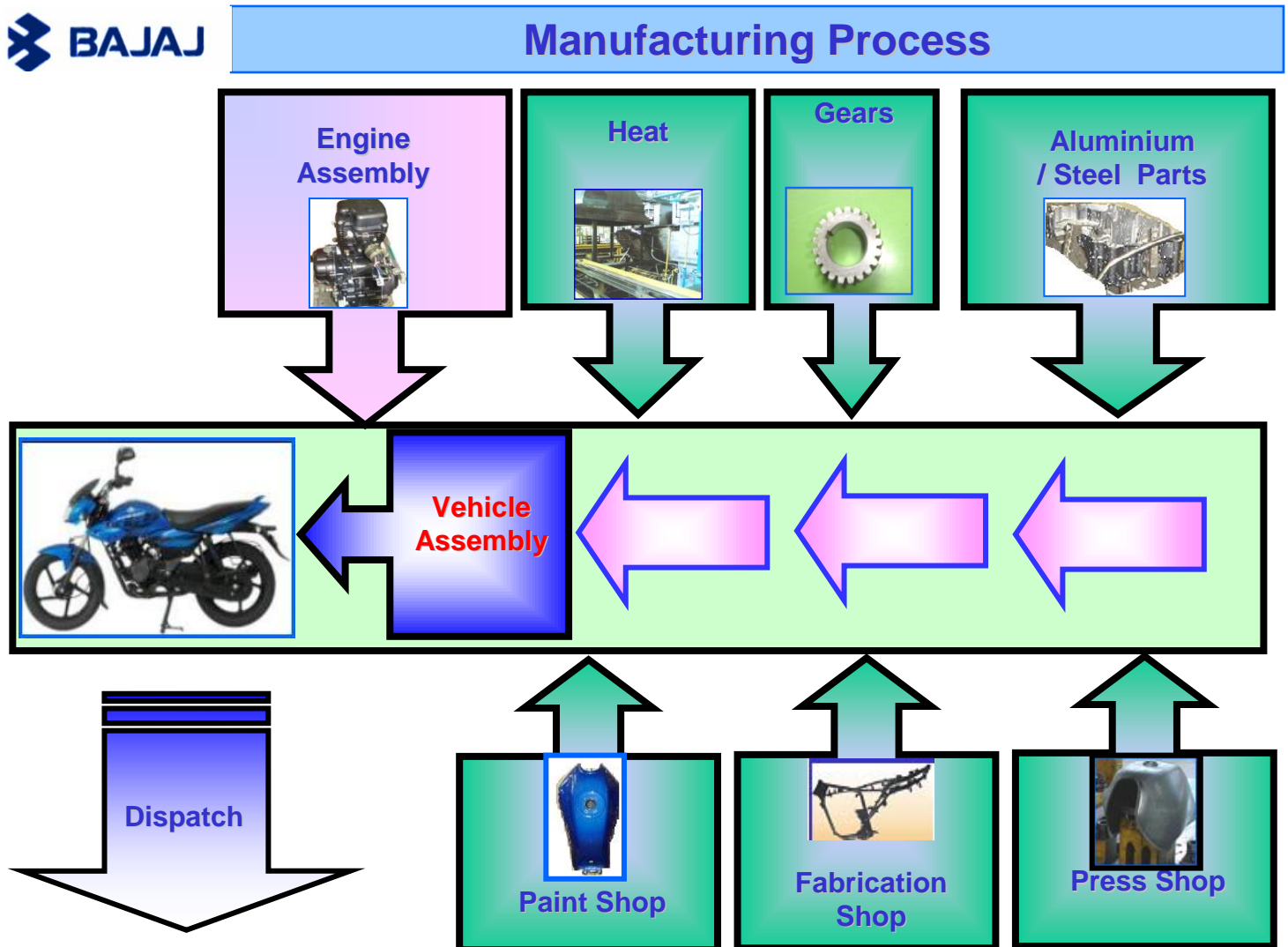


Manufacturing Process

The industrial complex of Bajaj Auto Limited-Waluj is spread over an area of 906 acres. The manufacturing activity consists of manufacturing motorized 2-wheelers, 3-wheelers & parts thereof and also machine tools required for captive consumption. The scooter plant was started in 1985 and other plants were started subsequently.

The manufacturing process for 2-wheelers and 3-wheelers as well as machine building is basically metal cutting and metal forming. The basic raw materials are steel and aluminium. Surface treatment processes like heat treatment, painting and electroplating are carried out in the factory.

Flow Chart of Manufacturing Process is depicted here:



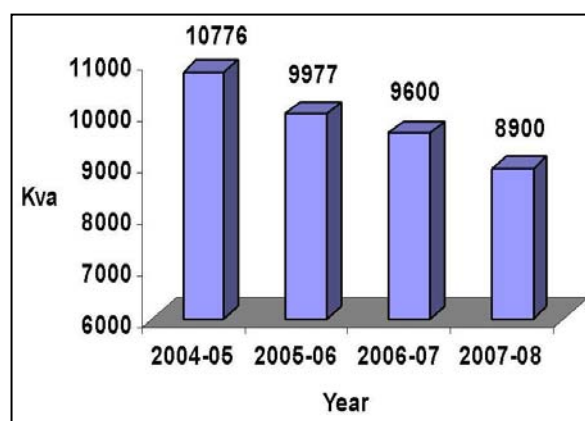
Energy Consumption:

Year	Elect. Saving (Lakh KWh)	Thermal (Fuel) saving M Kcal	Elect. Consumption Lakh KWh	Thermal (Fuel) Consumption M Kcal	Elect. Saving %	Thermal Saving %
2006-07	10.5	0	541.01	32165.7	1.94	0
2007-08	12.81	593.6	516.04	30206.0	2.48	1.97

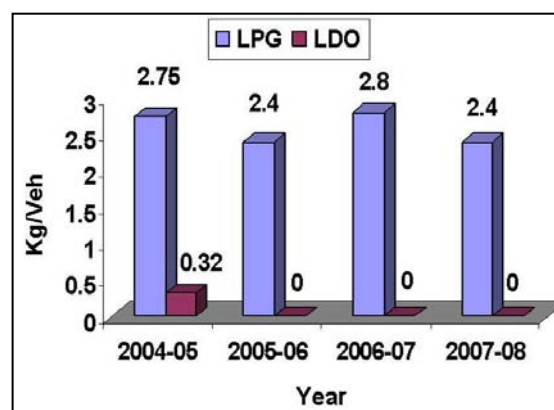
Specific Energy Consumption Reduction

Energy	Base Year 2003-04	Achieved 2005-06	Achieved 2006-07	Achieved 2007-08	Targets 2008-09
Electricity	67.54 Kwh/veh	45.81 Kwh/Veh	42.99 Kwh/veh	36.72 Kwh/veh	33.08 Kwh/veh
LPG	2.53 Kg / veh	2.4 Kg /veh	2.80 Kg / veh	2.4 Kg / veh	2.208 Kg / veh
LDO	0.83 Ltr / Veh	Zero	Zero	Zero	---
Compressed Air Electrical consumpti	8.9 Kwh /veh	7.66 Kwh/Veh	7.40 Kwh /veh	6.40 Kwh /veh	6.08 Kwh /veh
Water	0.89 m ³ / veh	0.62 m ³ /veh	0.58 m ³ / veh	0.54 m ³ / veh	0.51 m ³ / veh

Maximum Demand Reduction



Thermal Consumption Reduction



Energy Conservation: Commitment, Method and working at BALW

Top Management Committee fixes Corporate Objective for Energy every year by comparing performance with National / International Benchmark and targeting for higher achievement. The main objective is to operate most Cost Effective, Energy Efficient and Environment friendly Plant. Continuous Improvement in Working and close monitoring through Energy Management System is carried out.

Energy audit and efficiency assessment is built-in Quality, Environment and TPM Policies.

Awareness of Energy Conservation of all levels is reflected in continuous reduction of conversion cost of the vehicles produced year to year.

Some of the activities are

- Technological up gradation - Usage of Flexible Machining Centers instead of Special Purpose Machines.
- Implementation of Streamline Manufacturing Systems. Re-organization of Machines/ Process as per Product Layout.
- Single Digit time in Minutes for Change of Dies/ Tool. Compactness in Working area
- Reduction in rejection less than 1000 PPM (Parts Per Million) and aiming for 'ZERO' PPM.
- Nurturing of 'Right First time Ok' culture.
- Increase in Productivity of the workmen.
- Improvement in Processes and working methods.
- Utilization of Idle time.
- Minimization of Losses by TPM.
- Introduction of Direct on Line of material and elimination of stores.

The Energy conservation team/cell holds posters competition on Energy & Water Conservation for all employees. This percolates the Energy saving aspects to workmen level. Awareness level of conservation of energy amongst employee is very high.

System Followed is:

- Through the systems of Kaizens, TPM Circle/Quality Circles & suggestions, Energy saving proposals are received.
- Economics & Technical Feasibility is studied by experts for above received proposals for implementation.

- Every department set objectives against environment management plan yearly to conserve Natural resources.
- Targets are set for Conservation of Natural resources.
- Posters are displayed at work places on awareness of conservation of Energy.
- Sharing of information through Intra-net among our other plants & horizontal deployment.

Bajaj Auto Ltd. Waluj: **ENCON Strategy**

- **Eliminate wastage of Resources**

By maximizing Productivity of all operations & Processes

- **Adopt in the faster pace for Deployment**

Of all ideas in all areas of Business Thru “Maximizing Involvement of People

- **Focus on accomplishing investment projects,**

With Payback less than two year at faster pace & its horizontal deployment

- **Procurement of Energy Efficient Equipment** for new installation

- **Earlier-**

Conserve + Preserve + Reserve

- **Now- in addition to above:**

Reduce + Reuse + Recycle

ENERGY CONSERVATION CELL

Sr. Executive of the company is identified as in charge / co-coordinator for energy conservation objectives set by the company for past years

We have designated Energy Manager for :

Carrying out activities for efficient use of Energy and its conservation

To comply with energy consumption norms and standards set by bureau of energy efficiency & national productivity council.

To take measures necessary to create awareness & disseminate information for efficient use of energy & its conservation.

Organize training of personnel & specialists in the techniques for efficient use of energy & its conservation

To take professional steps to use energy efficient equipments.

RESPONSIBILITIES OF ENERGY MANAGER

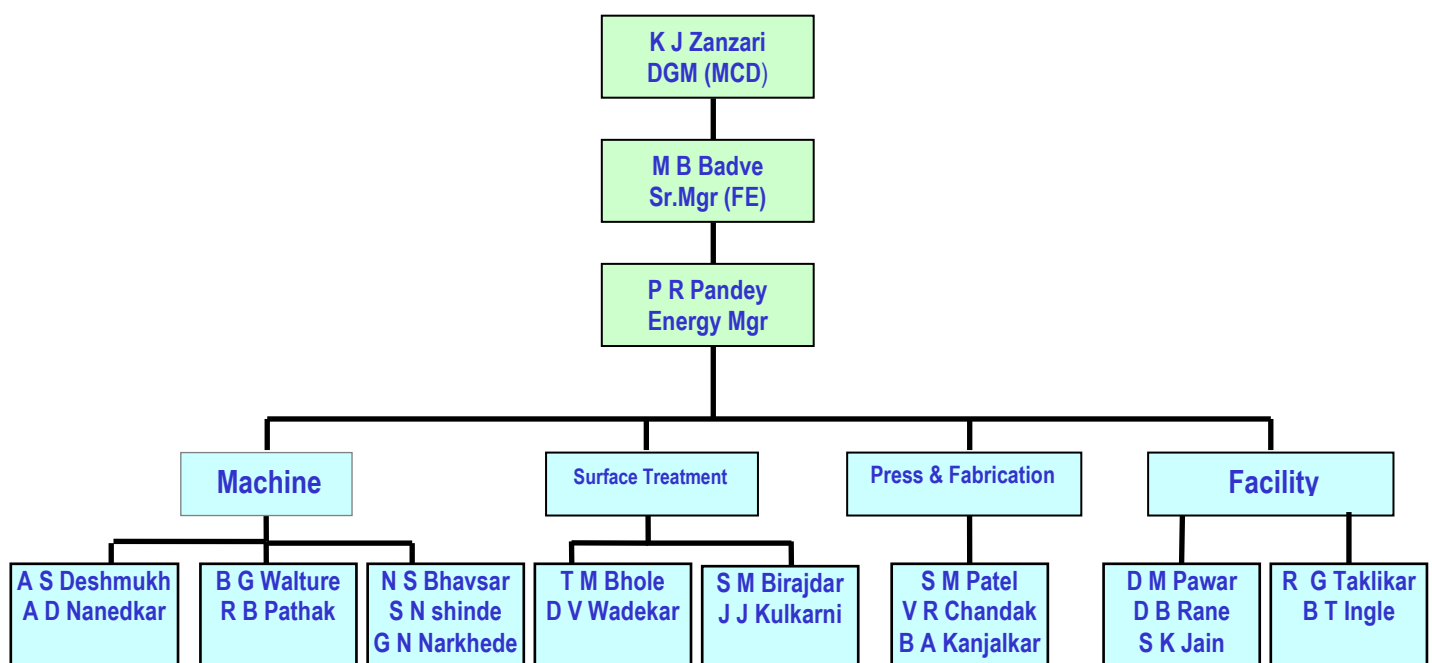
- 1 Prepare an annual activity plan & present to management concerning financially attractive investments to reduce energy costs.
- 2 Establish an energy conservation cell within the firm with management consent about the mandate & task of cell.
- 3 Initiate activities to improve monitoring & process control to reduce energy costs.
4. Analyze equipment performance with respect to energy efficiency.
5. Ensure proper functioning & calibration of instrumentation required assessing level of energy consumption directly or indirectly.

6. Prepare information material & conduct internal workshops about the topic for other staff.
7. Improve disaggregating of energy consumption data down to shop level or profit center of a firm.
8. Establish a methodology how to accurately calculate the specific energy consumption of various products/ services or activity of firm.
9. Develop & manage training programme for energy efficiency at operating level.
10. Co-ordinate nomination of management personnel for External programs
11. Create knowledge bank on sectional, national & international development on energy efficiency technology & management system & information denomination.
12. Develop integral system of energy efficiency & environmental up gradation.
13. Wide internal & external networking.
14. Co-ordinate implementation of energy audit / efficiency Improvement projects through external agencies.
15. Establish and/or participate in information exchange with other energy managers of the same sector through association.

DUTIES:

- 1 Report to BEE & state level designated agency once a year. The information with regard to the energy consumed & action taken in the recommendation of the accredited energy auditor as per BEE format.
- 2 Establish an improved data recording, collection & analysis system to keep track of energy consumption.
- 3 Provide support to accredited energy audit firm retained by the company for the conduct of energy audit.
- 4 Provide information to BEE as demanded in the act, and with respect to the tasks given by a mandate, and the job description.
- 5 Prepare a scheme for efficient use of energy & its conservation & implement such scheme keeping in view of the economic stability of the investment in such firm & manner as may be provided in the regulations of the energy conservation act.

ENERGY CONSERVATION CELL





SAFETY, OCCUPATIONAL HEALTH & ENVIRONMENTAL (SHE) POLICY

Bajaj Auto Ltd., manufacturer of automobiles is committed for continual improvement of safety, occupational health & environmental performance and compliance with applicable safety, occupational health & environmental legislations, regulations and other requirements.

Towards this, we shall strive to:

- Create a proactive SHE management system that addresses significant safety, occupational health & environmental aspects related to activities, products and services.
- Minimize the generation of waste and conserve resources through better technology and practices for prevention of pollution.
- Identify potential risks/hazards and follow safe work practices by using equipments, tools & personal protective equipments as applicable.
- Promote SHE awareness amongst all who work for and on behalf of Bajaj Auto Ltd. and motivate them to fulfill our commitments.

We, at Bajaj Auto, pledge ourselves towards creating and preserving a cleaner, healthier and safe work environment.

Date: 11th October, 2005

Rajiv Bajaj
Managing Director

Energy Conservation Plan & future Projects

(Outcome of External Energy Audit)

1. Waste Heat Recovery in Paint Shop Ovens
2. Installation of Fanless cooling towers
3. Installation of occupancy sensors for storage racks
4. Installation of LED lamps for street lighting
5. Installation of task lighting in shops
6. Neutral Compensator for office blocks
7. Installation of Solar concentrator for water heating
8. Installation of Aluminum Compressed air pipes & Headers

Total Identified Projects	: 41 Nos.
Expected Saving -Thermal	: 7 %
Expected Saving -Electrical	: 5.3 %
Total Investment (Estimated)	: Rs.9.7Million

Environment Improvement projects

1. No water discharged outside the company.
2. Tree & shrub Plantation- More than One Million
3. Wind Mill Installation – 65 MW (138 Nos.)
4. Up gradation of Effluent treatment Plant (ETP)
5. Installation of tertiary treatment plant
6. Installation of Nickel/Chrome heavy metal separation plant
7. Up gradation of Coolant treatment plant
8. Installation of Incinerator & fluidized Bed
9. Disposal Of Hazardous waste through centralized waste disposal facility
10. Bitumen additive is used for road repairs
- 11.No Packing materials from Vendors for transporting