

Asia Tobacco Company limited
Hosur (Tamil Nadu)

Unit Profile

The Asia Tobacco Company limited (ATC) was set up in 1974 for manufacturing cigarettes. The factory was started in 1975 in Hosur. It manufactured indigenous cigarette brands. Currently, ATC Ltd. manufactures the various brands of ITC Limited like “Gold Flake”, “Wills Navy cut”, “Scissors” etc. It has an installed capacity of 10297 mnc per annum. The company has so far produced 8069.41 million cigarettes in the year 2006-07 with a capacity utilization of 78.37 %. Its annual sales turn over for 2006-07 was Rs 1388.9 Lacs.

Starting from the year 2003-04, the factory has undergone major up gradation both in terms of the production technology as well as the supporting infrastructure. These changes include induction of new manufacturing technology, expansion of existing buildings, installation of state of the art HVAC system and numerous installations concerning quality control, safety and in-house power generation. The unit has also taken major strides towards achieving compliance with ATC’s EHS (Environment, Health and Safety) management systems.

Energy Consumption

As an environmentally oriented unit, ATC Ltd started focusing on energy efficiency and conservation from Jan-2006. The period from 2003-04 to date can be broken up into two different parts owing to the up gradation projects mentioned in the introduction, Despite close energy monitoring on daily basis and the implementation of various energy conservation initiatives, there has been a significant hike in energy consumption post the installation of HVAC system in the shop floor in Oct 2005. Hence the specific energy consumption has risen.

Description	Unit	2004-05	2005-06	2006-07
Annual production	Cigarettes (in million)	5956.2	7399.9	8069.4
Total energy consumption/annum	Lakhs kWh	18.4	30.5	35.2
Energy cost / annum	Rs. (lakhs)	91.9	150.4	175.8
Specific energy consumption	KWh /mnc	308.4	411.5	435.6
Electricity cost as % of manufacturing cost	%	12	16	18

Energy Conservation Commitment, Policy and Set up

Environmental Conservation is one of the key aspects of ATC's Long term strategy. A witness to that can be found in the unit's EHS Policy statement.(Annexure attached)

Energy Conservation forms an integral part of the unit's Environment, Health and Safety Policy. Efforts are continuously on to institutionalize Energy Efficiency and Conservation.

The unit has taken the following specific initiatives to conserve energy:

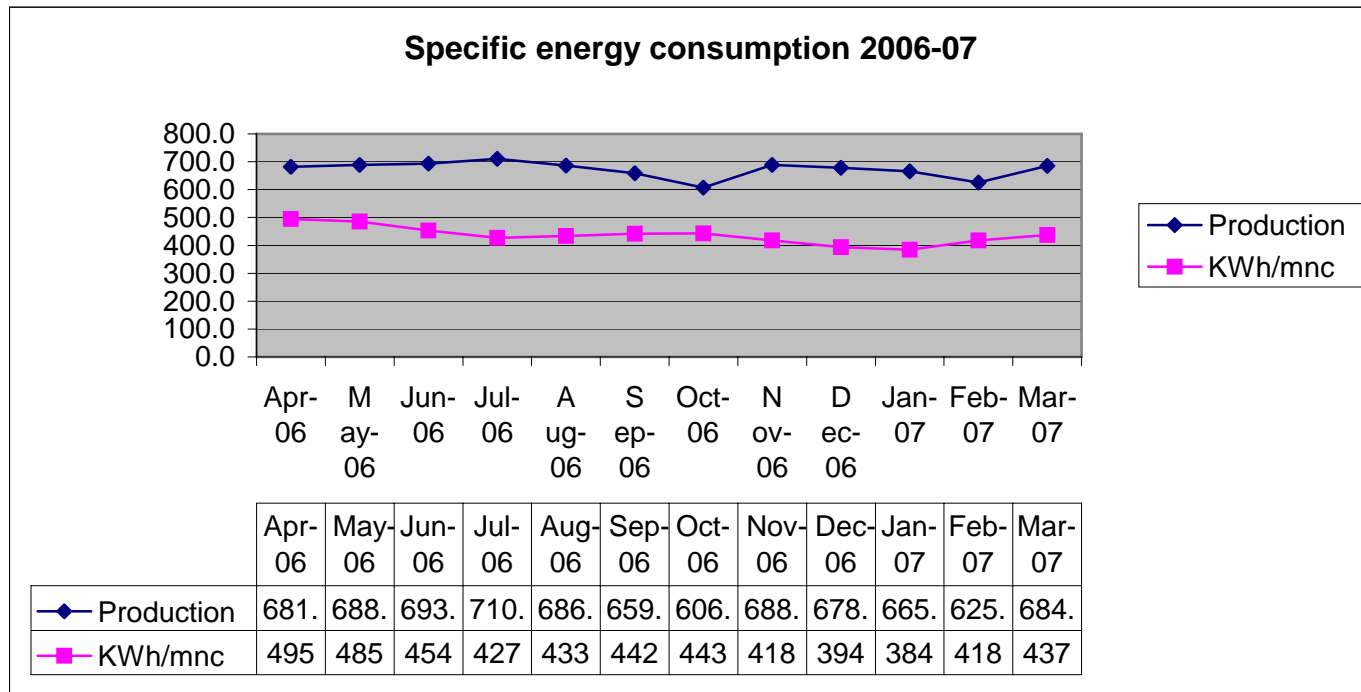
- The unit has undergone periodic energy audits by competent organizations e.g. TERI, PCRA etc.
- In line with the stated Energy conservation targets and audit recommendations, projects (Please refer to Annexure B) have been taken up with specific deliverables and their targets met. These are part of yearly objectives for performance appraisal for engineers in the plant.
- The unit monitors specific as well as overall efficiency of energy consumption on a daily basis. Variance on any index against the target is discussed in the daily review meetings. Unit head reviews energy performance on a monthly basis.
- Specific energy consumption is a key engineering index to measure the unit's performance.
- Adaptation of new energy efficient technologies.

Energy Conservation Achievements

During 2006-07 unit has implemented three major energy saving initiatives as listed below:

Sr.No.	Description	Saving KWh/annum	Saving INR/annum	Investment (INR)
1	Installation of one 40 HP 9000 CFM fan in place of two 4000 cfm, 30 H.P. fan	199680	748800	1200000
2	Identifying and arresting compressed air leakage	31200	117000	15000
3	Modulating fresh air intake as per ambient air condition in HVAC plant	120000	450000	Nil

Because of the above initiatives we achieved steady decrease in specific energy consumption during year 2006-07.



Energy Conservation Plans and targets

Sr.No.	Description	Saving KWh/annum	Saving in INR/annum	Investment (INR)
1)	Replacement of water pump in HVAC plant with energy efficient pump	39521	197606	330000
2)	Installation of energy efficient motor	19922	77914	188000
3)	Installation of lighting energy saver	44851	179405	256882

Environment and Safety

The unit is committed to preserve the environment and the safety of its employees. Following major improvements have been made during last three years:

a) Water Effluent

The effluents from various areas of the factory are led to the common sewage treatment plant. The quality of these treated effluents is within the prescribed norms of TNPCB. Treated water is used for gardening. ATC has thus achieved “Zero water discharge” status.

Unit has achieved 100 % roof top rain water harvesting.

b) Air

Regarding control of air pollution the company has installed new latest technology bag filters in Dust recovery area. The company is regularly monitoring all-pollution parameters of stack & also ambient air quality surrounding the industry.

All air emissions have been found to be well within the norms prescribed by TNPCB

The factory has got ISO 14001 certification & is committed to follow all the guidelines as per ISO standards.

c) Solid waste

The unit has already launched an initiative to green the entire supply chain of the raw materials that it uses and the wastes and the by products that it generates.

A Report on implementation of Energy Conservation Projects 2006-07

Installation of energy efficient fan with pleated PTFE bags for DRF system

1. Background of the Project:

The project was implemented for the following reasons:

- a. Existing fans were energy inefficient by design and were due for write-off

2. Objectives:

- a. To promote energy efficiency through new lay out design (eliminating dust cyclone)
- b. Capacity enhancement.

3. Observations:

Earlier, there were three DRF Fans available to extract tobacco dust from cigarette making machine. Out of these 3, any two were in use at any point of time. These fans were energy efficient by design and were suspected to be operating away from the duty point. These fans were driven by 30 HP motors.

DRF system also had a cyclone and bag filter (cloth fabric) for dust extraction. Cumulative pressure drop across cyclone and bag filter was 300mm Wg

Pressure drop depends on:

1. Number of Bags
2. Dust Loading
3. Efficiency of Purging System

3. Technical & Financial Analysis:

The newly installed 10000 CFM fan is driven by a 40 HP motor and is energy efficient by design. It is operating closer to best efficiency point

The old bags were replaced by 36 new pleated PTFE bags manufactured by Nordic. Due to pleating, these bags offer higher surface area for the same size of bag, i.e. volume of air filtered per bag increases dramatically and the cyclone was eliminated all together which reduced additional pressure drop across the system.

4. Impact of Implementation:

Reduction in pressure drop has allowed for reduction in energy consumption.

Avg. energy consumption with old system = 1620 units / day

With new system = 970 units / day

The savings of 640 units per day translate to Rs. **7.5 lacs** per annum.