

ITC Hotel Maurya Sheraton & Towers

BUILDING PROFILE

ITC HOTEL MAURYA SHERATON & TOWERS is a five star deluxe business hotel. The Hotel has started his operation in the year 1977. The total area of the hotel is 6 acres; air-conditioned area being 41283 sq metre and total built up area 55044 sq metre. Temperature maintained through out the airconditioned space is 22 degree. Its 24 hrs working hotel. The connected load of the hotel is approximately 4657 KW.



C HOTEL MAURYA SHERATON & TOWERS

ENVIRONMENT & ENERGY CONSERVATION COMMITMENT POLICY & SET UP

ITC Hotel Maurya Sheraton & Towers has policy for environment and energy conservation on corporate level as well as on the facility level. List of the main programmes and initiatives related to environment, social responsibility, and sustainable development on corporate level are:-

- 1) ITC is a water – positive corporation and on its way to becoming a carbon- positive corporation.
- 2) ITC's Social and Farm Forestry programmes have so far enabled farmers to plant 108 million saplings over 26,500 hectares.
- 3) ITC's e- Choupal currently empowers over 3 million farmers by leveraging Information Technology. E-Choupal has received the World Business Award from UNDP for its contribution to poverty alleviation.
- 4) ITC's e-Choupal network will cover nearly 1,00,000 villages, or one sixth of rural India, over the next 5 years.
- 5) ITC's Integrated Watershed Development Programme currently provides critical irrigation to over 8000 hectares of drought- prone land.
- 6) All ITC units has specific plans for "zero" waste water discharge.
- 7) Creating women entrepreneurs.

- 8) Educating rural children. More than 9000 village go to state run schools supported by ITC's primary education programme.

Along with the above policies the initiatives and action taken by the hotel:-

The Green Objectives

- To achieve sound environmental practices across our entire operations.
- To comply fully with all environmental legislations.
- To minimize consumption of energy, water and other all other natural resources.
- To minimize waste and to reduce, reuse and recycle the resources consumed by our business wherever feasible.
- To reduce pollution (Air, Water, Ground and Noise) to a minimum and wherever appropriate, to treat and reuse effluents.
- To invite customer, suppliers and contractors to participate in our efforts to protect the environment.
- Where we can, to work with others in the tourism industry, in public agencies and the community at large to achieve wider environmental goals.
- To provide all employees with the training and resources required to meet our objectives.
- To openly communicate our policies and practices to interested parties.=F
- To monitor and record our environmental impacts on a regular basis and compare our performance with our policies, objectives & Targets.
- ITC's social cause range of creating cards launched in partnership with the SOS children's village of India.
- Greening waste lands. The programme has rejuvenated more than 19,500 hectares of waste lands by planting 66 millions saplings creating livelihood opportunities for nearly 2,00,000 people.
- ITC continues with its efforts to enlarge rain water harvesting (RWH) potential both with in its units and in socially relevant Water shed development projects.Net water consumption in 2003-2004 is 8.44 million Kl and total (RWH) potential created Is 16.06 million Kl.
- Carbon positive corporation – The company's commitment to Greening 1,00,000 hectares by helping grow more plantations in the coming years will make ITC a carbon positive corporations.

Energy Conservation Achievements:- Unit got the certification of ISO: 14001

Implemented Measures: - The following energy efficient measures have been implemented in the following areas

1. Building Management System (PC based):- The Building Management System is key centre for retrieving the datas of all AHUs, TFAs & exhaust used for kitchen. It uses DP sensor for sending the details of for eg. For AHU / TFA the load conditions of the corresponding area in terms of return air and supply air temperature, accordingly adjust the frequency for the drive. For the exhaust, being the most essential part for the kitchen operation DP sensor gives the running condition of the exhaust.

2. Energy management strategy for Airconditioning:-

a. **Chilled water flow** for the all AHUs and TFAs is adjusted by the use of two way **valves** in the pipeline which according to the load adjust the flow of water through the coils.

b. **Cooling Towers** fans speed is adjusted according to the return water temperature from the Tower and hence, save lots of energy and same can be.

c. VFD's for Condenser & Chilled Water Pumps

3. Lighting Upgrade/ Modification: - Extensive use of CFLs and PL bulbs in place of incandescent bulbs. Use of T5 28 watts tube lights in place of ordinary 40 w tubes.

4. **Modernization of Elevators:-** Hotel has total 14 elevators out of which it has replaced 12 numbers with VVF (variable voltage and frequency) Mitsubishi elevators which according to the load and call adjust its operations.

5. **Up gradation of generators:** - Installation of 2 numbers 1500 KVA diesel generator which are in accordance with EURO NORMS for environment and energy saving.

6. **Installation of Capacitor banks for improving power factor.**

7. **Installation of Water & Energy Metres for tracking water and electrical consumption.**

8. **Installation of burners for boilers to use PNG as fuel for energy conservation with almost negligible smoke.**

Energy Conservation Plans for the unit is as follows:-

- 1) Installation of Energy Efficient and Eco-Friendly Chillers
- 2) Vfd's With PLC for Main Water Pumps and Raw Water Pumps.
- 3) Replacement of Guest Rooms and Offices: -- FCU Thermostats with Digital Thermostat for Energy Saving During Non-Occupancy Periods.
- 4) Upgradation of Capacitor Bank Panels to Maintain Unity Power Factor.
- 5) Automatic Balancing Valve & 02 Ways for Basement /Ground Floor Ahu's.
- 6) Vfd's For Laundry Tumblers with RH Sensor.
- 7) All Cold Storages In Main Kitchen Will Be Of CFC Free – Stand Alone Cooling Units.
- 8) Rain Harvesting System to Extend To KM and ITC-1 Terrace.
- 9) Usage of Flow Regulating Devices to Extend To All Taps to Reduce Water Consumption By 10%.
- 10) Ozone Injection System to Use in the Laundry for Reducing the Chemical and Water.
- 11) Enhancement of ETP Plant.
- 12) Direct PNG Fired Tumbler
- 13) Cooling Tower Upgradation.
- 14) Conversion of the entire Electrical Oven to PNG Oven in kitchen.
- 15) Co₂ & Enthalpy Sensor with VFD on TFAs.
- 16) Pre Cooling For TFAs.

ENERGY CONSERVATIONS METOD EMPLOYED IN THE YEAR 2004 - 2005

1. Conversion of incandescent bulbs and ordinary 40 W Tube lights in to CFL/PL lamps and use of T 5 28 W tube lights .

Calculation for the above to be implemented is

T 5 28 w Tubelight consumes	29W/hr
Ordinary Tubelight 40 W consumes	56W/hr
Average operation hours/day	16
No of lights	10 (say)
Consumption in a year for 40 w	3270.4kwh
Consumption for T5 28 w tubelight	1693.6kwh
Savings in a year in units	1576.8kwh
Savings in rupees @6.37	10044.21
Investment for correction	7700
Return of investment	4 days

2. Conversion of 2 no carrier in to cfc free refrigerant (planning done and order placed)
3. Primary and secondary chilled water system for chiller (planning done)
4. Upgradatation of cooling towers (planning done)