

## Jai Mahal Palace, Jaipur

Jai Mahal Palace is a 100 room 5 star deluxe hotel situated at Jaipur, India. It is spread in 17 acres and is an oasis of greenery in the heart of the city. It was one of the first hotels in India to deploy its environmental concern through undertaking to continually improving its environmental performance, which lead to its ISO 14001 accreditation in the year 2002. The hotel was also conferred the award of '**Environment Champion of the Year**' in the Large Hotels category by the Federation of Hotels & Restaurant Association of India in the year 2000.

The Jai Mahal Palace has never looked back since then and has been continuously moving beyond the statute to increase its environmental footprint in a low resource geography and in an industry where conspicuous consumption is the norm.

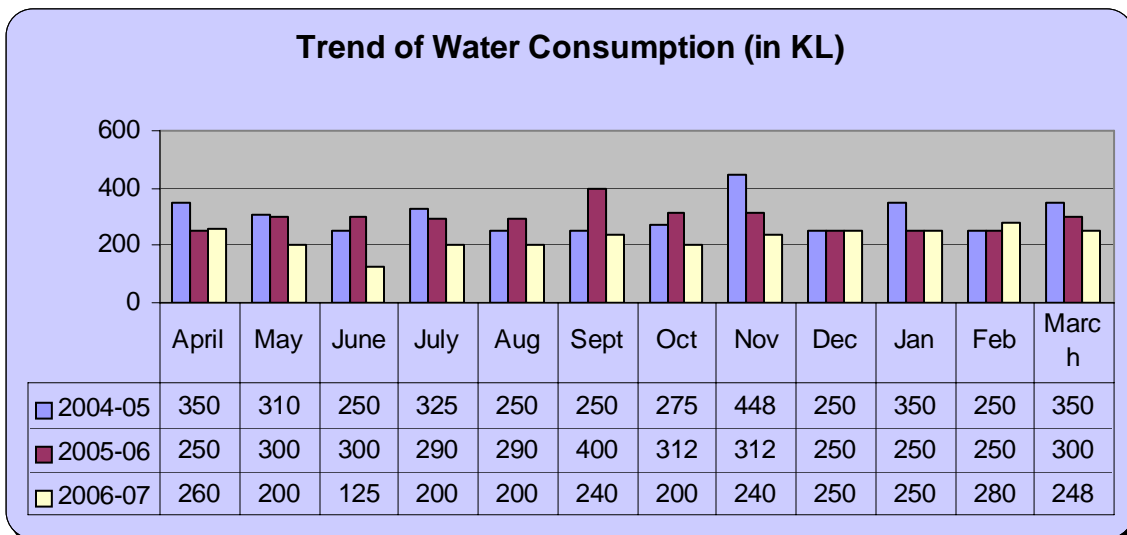
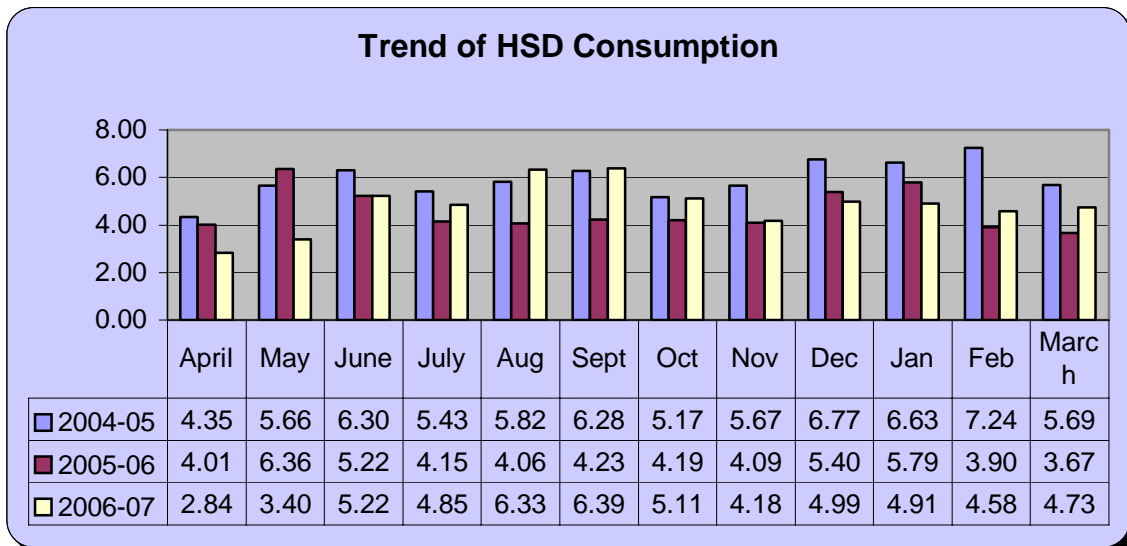
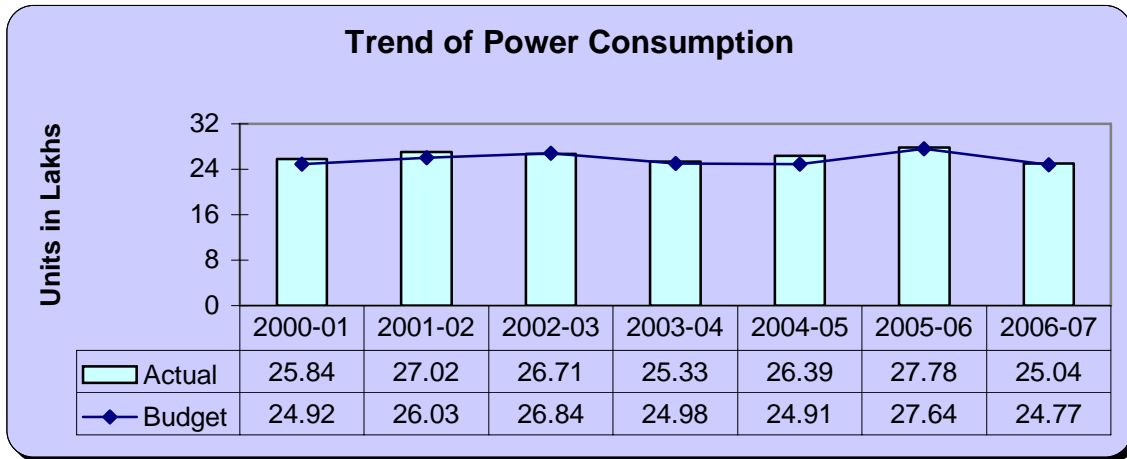


Some of our successes are recycling our water resources through the Sewage treatment plant and reusing it; converting wet waste to energy through the biogas plant; eliminating the use of harmful substances; harnessing appropriate technology to reduce consumption of natural resources and adopting environmental best practices. We are also active in creating environmental awareness among our stakeholders including our customers, suppliers and the local community.

Apart from the environment, The Jai Mahal Palace also extends out to the key communities in which it is located. This is in keeping with its Community Social Responsibility intent of the Taj Group of Hotels. It is actively engaged is supporting causes of poverty relief, health, creating employment and traditional crafts either directly or through partnering with various non-governmental bodies.

## Energy Consumption

The connected load is approximately 1254 KVA; Energy consumption in Jai Mahal Hotel is shown in the fig below:



## **Jai Mahal Palace's Environmental Vision Statement**

" To be an oasis of greenery in the heart of the city and endeavor to improve upon our environmental performance through constant monitoring of the impact of our activities on environment, thereby promoting responsible eco tourism."

## **Energy and Environmental Policy Statement**

**Jai Mahal Palace is committed to:**

- Protecting and conserving the natural environment.
- Preventing all types of pollution.
- Using fewer natural resources and eliminating or minimizing waste.
- Complying with applicable legal requirements and other requirements, which relate to its environmental aspects.
- Continually improving its environmental performance through setting and achieving environmental objectives and targets.
- Conservation of power, fuel and water every year.
- Use of 100% Eco-friendly refrigerants.
- Eco-drives for greener Jai Mahal and Jaipur
- LPG consumption reduction by using Bio Gas Plant.
- OHSAS training to create awareness amongst employees.

**Creating awareness of and sensitivity towards environment among employees, guests, contractors, suppliers and the community at large.**

## Our Operational Achievements

### **1. Bio Gas Plant: (2006 - 07)**

New pipelines were laid to maximize the utilization of Bio gas plant and were connected with Giardino restaurant.



### **2. Installation of P.F relays: (2006 – 07)**

We have installed new P.F relays and Capacitors to improve the power factor to 0.99 and four capacitors have been connected on the load end feeders.



### **3. Insulation on Hot, Cold and chilled water lines: (2006 – 07)**

We have insulated all the hot water, cold and chilled water lines to reduce the heat losses.

**4. Installation of auto dimmers in the Lobby and all the restaurants:  
(2006 – 07)**

We have installed Auto dimmers in the lobby and restaurants lightings and all the dimmer are set as per the sunset and sunrise timings.



**5. Automation on Wet Scrubber: (2006 – 07)**

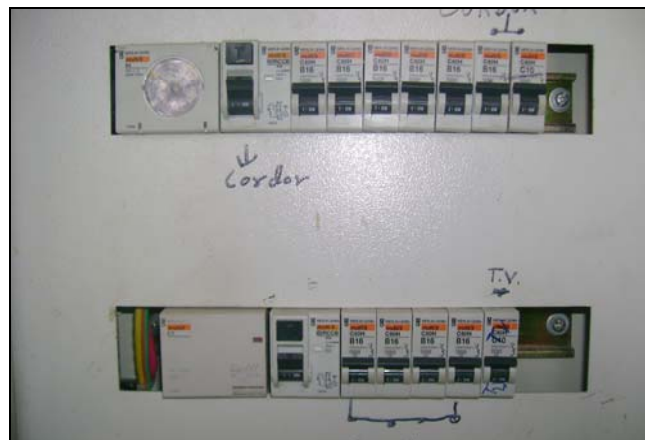
Automation on Wet Scrubber Pumps with D.G sets and Boilers so that it will only run when D.G and boilers are running.

**6. Installation of new hydro-pneumatic system: (2005-06)**

We have redesigned and installed new hydro-pneumatic system where we run only one feed water pump (instead of two pumps) for hot and cold water.

**7. Installation of timers on external lights: (2005 – 06)**

We have installed timers on external lighting, which works on seasonal sunrise and sunset timings, which help us, reduce the power consumption for external building lighting.



8. Replaced Old AHUs, TFAs and FCUs with Energy Efficient ones. (2005 - 06)

**9. Installation of Condensate tank: (2005 – 06)**

We have installed condensate tank in Laundry steam return line because of which we are saving energy by Pre-heating of boiler feed water (reduction in boiler running hrs.)

**10. Installation of Variable Frequency Drives: (2004 – 05)**

We have installed 05 nos. Variable frequency drives. Out of which 02 nos. were installed for Chilled water secondary pumps to vary the flow as per the load requirement of the Chiller plant, 02 nos. were installed for Fresh air and Exhaust Fans to vary the CFMs as per the requirement in Main kitchen and 01 no. was installed in hydro-pneumatic system to pressurize the hot and cold water lines as per the requirement.



**11. Installation of new heat exchanger: (2004 - 05)**

We have replaced shell and tube type heat exchanger with new energy efficient plate type heat exchanger.

### **12. Installation of New Energy Efficient Compressors: (2004-05)**

We have changed old compressor 02nos. in walk-in and 02nos. in deep freezer. New energy efficient compressors also changed from water-cooled condenser to air-cooled condenser.



### **13. Replaced old raw water pumps with Energy Efficient Pumps. (2004 - 05)**

#### **Energy Conservation Plans and Targets**

1. Installation of De-super heaters, for condenser heat recovery, on hot water system.
2. Replacement of Old chilled water pumps with Energy Efficient Pumps.
3. Installing VFDs for selected AHUs to reduce load during lean operation.
4. Recovering energy from room exhaust to pre-cool the air to TFAs.
5. Installing Auto Voltage regulator with energy saver.
6. Replacing lighting with Energy Efficient low heat emitting lamps.
7. Installing Energy efficient motors in selected locations.
8. Modify aeration system to reduce ETP power consumption.
9. Replacement of all inefficient pumps in the ETP.