

## Sunair Hotels Ltd, New Delhi

A five-star deluxe hotel conveniently located for sightseeing, business and shopping near Connaught Place in downtown New Delhi. It has a total of 178 guest rooms and suites, each complete with the latest amenities and functions.

Restaurants include a 24 hours restaurant serving international cuisine, and India's most authentic Japanese restaurant.

The bar lounge serves famous liquors from around the world. The hotel also features a business center, a fitness club, conference rooms and banquet halls.

This hotel for the new millennium delivers comfort and security for leisure and business travelers, blending Indian traditions, world-standard hospitality and Japanese service.

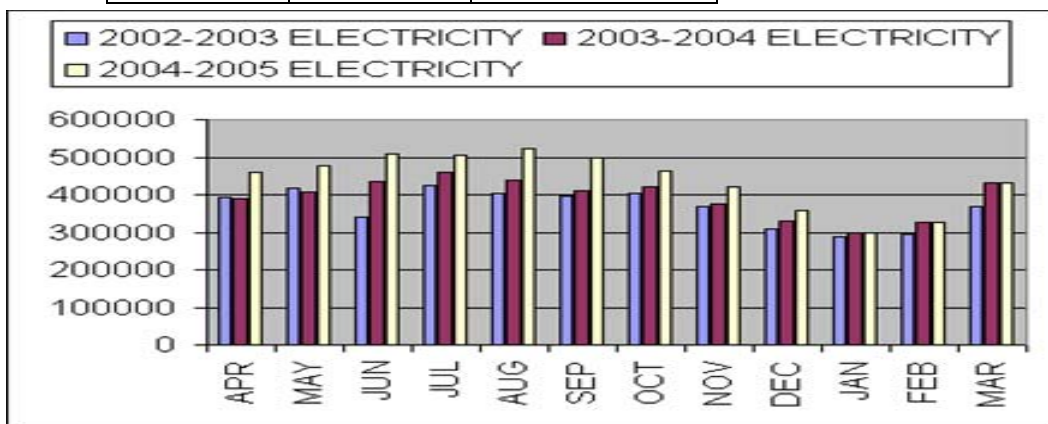
The total area of hotel is 22000 sq.mtr., the air-conditioned area being 14500 sq.mtr. The temperature maintained throughout the air-conditioned space is 22-23 deg. The connected load is approximately 3000 kW.

### Energy Consumption

Figures of the Energy consumption at hotel have shown decline as seen in the fig.below.

2002-2003      2003-2004      2004-2005

	ELECTRICITY	ELECTRICITY	ELECTRICITY
APR	394140	389970	458137.5
MAY	418900	408249	478800
JUN	339852	436140	508725
JUL	424291.2	459547.5	504030
AUG	402007.5	437857.5	521377.5
SEP	396300	409133	499350
OCT	403837.5	419400	463657.5
NOV	367309.89	374138	421725
DEC	309390	329925	358432
JAN	287085	297675	297675
FEB	295410	327547.5	327548
MAR	368287.5	432008	432008
	<b>4406810.59</b>	<b>4721590.50</b>	<b>5271465.50</b>



### Energy Conservation Commitment, Policy & Setup

The hotel is committed to use energy judiciously, efficiently without any adverse effect on environment and society. The management of the hotel gives lot of stress on the use of latest energy efficient technology. Various state of the art gadgets and controls are installed for

proper and efficient control of the electrical and mechanical equipment. Automatic Power Correction panels are installed in the control room. Regular energy audits are being conducted. The annual energy consumption of the Hotel is about 5.4 million units.

## **Energy Conservation Achievements**

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

### **1. a. PC based Energy Management System:-**

The building control Automation system is a state of art system that is Building Automation System. One scaleable system that pulls together all core building systems and integrates information from many different enterprise subsystems. With the Johnson Control Enterprises Buildings Integrator, the building has the information needed to make critical decisions quickly – decisions that ultimately help us to conserve energy.

### **b. CNG Project**

We had installed gas-fired burner for boilers-2 nos. Previously we are using LDO for boilers. We had worked out & it was found that PNG operation is cheaper than LDO than we had installed CNG project in year December 2004.

We are using natural gas for cooking, hot water, steam generation & air conditioning. Needless to mention that the priority of choosing natural gas as a leader of energy saving. The CNG has various advantages like safety, economical, convenient and environment friendly. In addition to reduces the maintenance cost as the efficiency of natural gas is much higher in comparison to alternative fuel available (i.e. HSD & LDO). We found that average saving per month is Rs. 2,50,000.00.

## **2. Energy management strategy for Chillers**

### **• Load reset**

The chilled water system has been designed for Primary and Secondary pumping system. The closing of common pipe causes loss of performance of the system as well as wastage of primary pump energy, especially when three or more than three secondary pumps are running and only one primary pump runs. The loss depends upon for how many hours and for how many days the single primary pump is run.

### **• Cooling Tower**

A cooling tower's capacity to cool the water is limited by the ambient conditions. If the condenser water design temperature minus the approach temperature of the tower is lower than the outside air temperature, than Cooling tower fans can be sequenced, Set point of the condenser water can be raised, quantity of water can be by-passed to reduce the load on C/T, Fans can be switched off to provide free cooling etc.

## **3. Energy management strategy for Air handling units**

### **• Preventive Maintenance**

We have the separate team of preventive maintenance for cleaning of FCU's, Filter's, Coil's, AHU's, & Air Washer's.

### **• Guest Room Lighting Control System**

We have the latest Lighting Control System based on singapore, which automatically control room temperature with different parameters.

### **• Optimum Start/Stop**

All AHU's, Air Washer's, are automatically start/stop & Temperature control system.

## **Energy Conservation plans & Targets**

- Power factor keeping PF- 0.99.
- Additional power control panel installation.
- All AHU to be convert into variable speed system.
- Hydro-pneumatic pumps to be convert into variable speed pumps.

Note: Any Organisation not submitting this information is likely to loose certain weightage during evaluation.

