

Ecotel Concept for Energy Conservation and Waste Reduction in Hotel Industries

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ABSTRACT

A Hotel can be defined as "A hotel is a service industry that provides paid lodging, usually on a short-term basis". With respect to Indian context, hotels also refer to a restaurant because the best restaurants were always situated near to a hotel. The quality & cost of hotels are directly proportional to the range and type of services available [1][8]. An environmental protection, efficient waste management system [5] is a crucial aspect of any hospitality business. In this age where global warming has been an issue of concern in the world ecotel plays a major role. Ecotel can provide solution or measure taken up by hotel industry to come in terms with the environment. Where Ecotel hotels are considered as environment sensitive hotels." Ecotel is a new concept in hotels which ensures to work for environment protection and preservation.

Keywords

Ecotel; Waste management; Recycling; Energy Conservation; Globes;

1. INTRODUCTION

A hotel is a service industry that provides paid lodging, usually on a short-term basis. Which usually contains basic accommodation, consisting only of a room with a bed, cupboard, small table & washstand has largely been replaced by rooms with modern facilities, including en-suite bathrooms and AC or climate control. Other common utilities found in hotel rooms are telephone, alarm clock, a TV, and Internet connection and many other services and activities. Higher star hotels provide more facilities & customer comfort services such as a childcare, restaurant, swimming pool, & conference room & social function services.

1.1 HOTEL CLASSIFICATIONS

The Quality & cost of hotels are usually dependent on the type of services afford. In recent days there is a drastic increase in tourism worldwide, standards, service expectations have improved considerably. Keeping in mind star rating systems have been introduced that is from 1 to 5 stars. Higher the star ratings make a hotel more luxury in terms of service and hospitality at the same time cost also.

1.2 NEW CONCEPT OF ECOTEL HOTELS:

Ecotel hotels can be defined as "a hotel or accommodation that has made crucial environmental improvements to its structure in order to minimize its impact on the environment". Traditionally these hotels were built near forests, hill stations called as Eco Lodges because of their location. The new concept Eco Hotel is a idea that fills following Criteria Ecological sustainability, Dependence on the natural

environment, contribution towards environmental training programs & Provision of an economic return to the local community. Ecotel hotels can also be said as hallmark for environment sensitive hotels. Having an Ecotel Certification sates that the hotel is completely environment friendl. Detailed difference showed in table1. Any hotel wants to apply for the certification need to fulfil certain criteria & norms set by the authorities before they are awarded the 5 Globe Certification Award. The main 5 key areas are identified and inspected by the HVS International, for ecotel certification. The five key areas are:

1. Environmental Commitment
2. Energy Efficiency
3. Solid Waste Management
4. Water Conservation
5. Employee Environmental Education & Community Involvement.



Figure1: Energy pyramid

Only a few hotels have received the 5 Globe Ecotel Certifications world over. The first 5-Globe Certification award went to the Orchid Hotel, Mumbai in Asia category.

Table 1: Detailed difference between Normal & Ecotel hotels

	NORMAL HOTELS	ECOTEL HOTELS
MEANING:	A regular hotel basically	Ecotel hotels are defined as "a

	provides paid staying usually on a short-term basis.	hotel that has made significant important in environmental conditions to its structure in order to minimize its effect to the environment".
MAIN AIM:	Hotels main aim is to get maximum profit with customer satisfaction.	Ecotel main aim is to build clean, environmental friendly along with profit maximization & customer satisfaction. Here ecotel gives more weight age on environment friendly aspects.
PRODUCTS USED:	Normal Hotels always prefers branded or known products in order to maintain their image.	Ecotel hotels mainly use products that are safer to the environment & cause minimal harm to the society & environment.
WASTE MATERIALS:	Usually the waste which is generated in hotels, are thrown away as garbage & no recycle systems are adopted.	In ecotel hotels the generated waste, is differentiated as dry and wet garbage & they are recycled & used properly.
CONSTRUCTION OF HOTEL:	Constructed based on posh look or outside appearance	Here Ecotel hotels are constructed based on eco friendly aspects and eco norms.
EFFECT TO THE ENVIRONMENT:	Normal hotels indirectly cause harm to the environment.	No harmful effects on environment, ecotel hotels are always protects the ecology.

2 DETAILED STUDIES ON ECOTEL HOTELS:

5 GLOBES (CRITERIA & INSPECTION) OF ECOTEL

^{[2][3]}The Ecotel Certification is based on 5 areas of environmentalism, each of which is assigned by a Globe award. These five areas are referred to as the 'cornerstones of

environmental responsibility' or simply as 'Globes' which are briefly discussed below.

1. Energy conservation:

A proper framework to reduce the energy consumption in the hotel Utilizing the proper output of the product like minimum lighting is being used, the extent of involvement of the guests as well as the employees etc. which makes a difference to the final score refer fig1.

2. Water conservation:

Water conservation can implemented in many ways like adopting good management practices, educating the employees to use in a better way ,improving water quality & utilization of unwanted water to other areas like gardening, washing etc. water recycle is also a key point in water conservation. Proper implementation throughout the departments in the hotel.

3. Solid waste management (SWM):

SWM plays a major role for ecotel certificate. Here the hotel must effectively recycle & manages waste wherever generated. Proper systems are adopted for collection, recycling & disposal of these wastes in all departments of the hotels are a must for the Ecotel certificate. Proper training must be provided to all employees of the hotel including top management for better implementation of the solid waste management concept

4. Employee environmental education:

This factor helps to determine the hotel employee's involvement & efforts towards the environment. The hotel must maintain training modules in place for all the employees at all levels to understand & to get familiarize with eco-friendly initiatives of the hotel.

5. Environmental commitment:

The hotel, resort or inn must execute respective hotel environmental conditions towards the protection, preservation & enhancement of the natural environment. The operations, activities & written statements, communicate its commitment to the environment. It should clearly mention its environmental dedication. In addition to this every hotel must adopt a green team headed by top management making all departments are working as per the hotel's environmental mission.

3 CASE STUDY

Implementation of Environmental Management Systems - ISO 14001

The Orchid Hotel, Mumbai

To demonstrate the study of ecotel concept, we have a taken a case study which will show how the ecotel concept not only benefits the owner and customer but also provides friendly environment for coming generations. A Mumbai based hotel called the orchid, Tajinder Narang, Ann Shaw (Training Department. Launched in 1997, The Orchid, Asia's 1st Ecotel Hotel, a prestigious hotel or leading landmark in the city canter of Mumbai, has gained international importance due to its pioneering efforts in the eco-friendly sphere. The Mission Statement of The Orchid clearly states its core values in accepting responsibility for living in close harmony with the society & environment. In addition to this Orchid ecotel hotel received ISO-14001 Environment Management Systems certification for the implementation of eco-friendly practices

within 12 months of commencing the ecotel process. The significant factors are identified based on environment impacts,^{[5][7]} along with appropriate action are also advised in table 2.

Table 2: The total energy & cost saving achieved in the year 2001-2002

Initiatives and Benefits	Cost saving
Installing the metal halide lamps & fittings in Tennis Court. – Reducing the electrical load from 32 kW -8 kWh. - Reduction in lamp replacement cost. - Reduction in manpower cost for handling fused bulbs. -Improvement in distribution of light.	Rs. 114/hr
Installing the compact fluorescent lamp - Replacement of 3000 candle lamps of 25w in guest floor corridors, lobby porch & in banquet area with CFL of 5W.	Rs. 2,00,000/ month
Installation of a condensing coil in hot water tank to recover heat from the condensate from Laundry & installation of plate type heat exchanger to recover additional heat from the condensate	Rs. 20,000/month
Reduction in contract demand from 4118KVA - 3000KVA	Rs. 1,68,500/month
Up grading capacitor panel to improve p-factor(power) from 0.96-0.99 month	Rs.1, 40,000 / month
Usage of treated water from recycled treatment plant for gardening & water month adds up.	Rs.17,300 / month
Renovating the chilled pool plant with installation of a plate type heat exchanger to get the chilling effect	Rs.12,000/ month
Installing heat exchanger in steam boilers exhaust from heat recovery	Rs. 90,000/month

4 CONCLUSION

Thus we can conclude that majority of the hotels are leaning towards Ecotel hotels. The ecotel hotels give us the clear idea of hotels turning green would in a way contribute towards protection of environment and stop causing too much harm to the environment. From the orchid case study analysis it's easy to say that ecotel hotels utilizes the equipment to its core making more energy efficient without harming the

environment or the society. In today's world lot of hotels have shifting from normal hotels to ecotel hotels, so it helps in ecological balance as the ways and practice as justified. It is very clear that ecotel hotels concentrate more being friendly towards environment and customers satisfaction at the same time making cost or profit maximization. From the above analysis we can conclude that the concept of Ecotel is gaining more popular & many hotels all around are leaning towards Ecotel.

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