

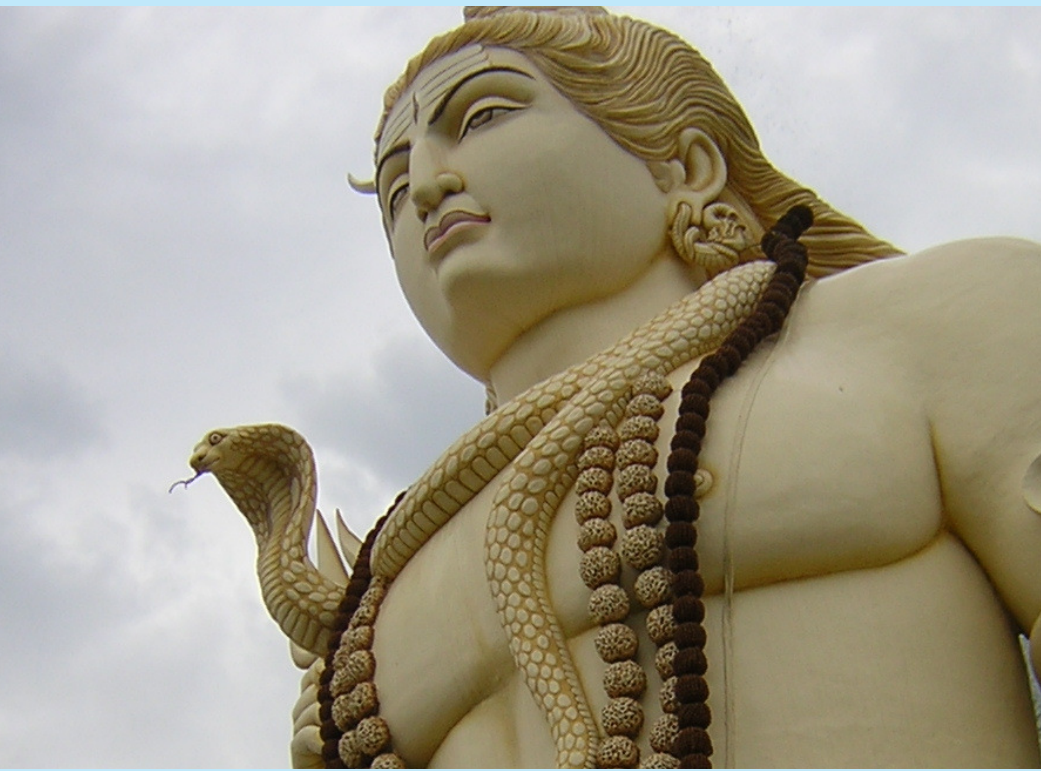


EARTHCHECK

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The Taj Residency Hotel has been using the EarthCheck tool to benchmark its environmental and socio-cultural performance since 2008 with the goal of achieving international best practice.

The Hotel's environmental policy strives towards achieving environmental and social sustainability and to benefit its employees, suppliers, guests and the immediate community.

The Hotel's major achievements to date include:

An increase in renewable energy consumption from 7% to 30.4%

A total of **98% of all solid waste is recycled or reused** instead of being sent to landfill

The recycling of 25% of the site's wastewater

An 18% increase in community commitment achieving 98% of the EarthCheck tools requirements aimed at supporting and empowering the local community

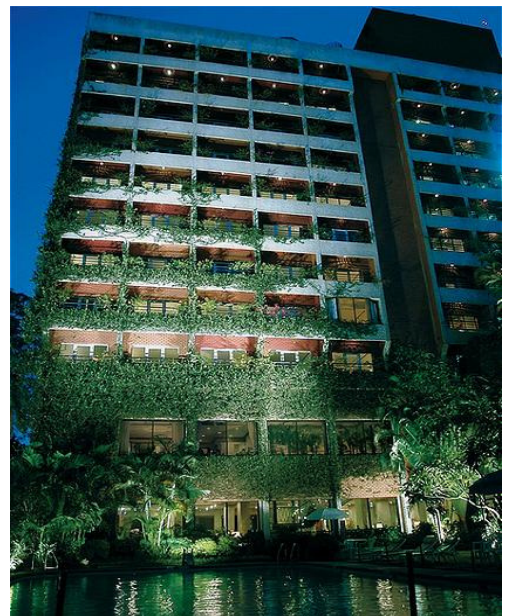
TAJ RESIDENCY BANGALORE, INDIA

The Taj Residency Hotel in the heart of Bangalore, India is one of the 60 Taj Hotel Resort and Palaces located in 45 different locations across India. The India Hotel Company Limited also has an additional 15 international hotels in Malaysia, the United Kingdom, the United States of America, Bhutan, Sri Lanka, Africa, the Middle East and Australia.

The Taj Residency is a 5 star business hotel with 167 rooms and 6 function rooms capable of holding up to 1000 guests. Facilities include a swimming pool, fitness centre, a beauty parlour and hair salon, spa and bookshop.

In an endeavour to reinstate its vision and efforts to boost sustainable tourism and integrate environment management in all business areas, the holding company Taj Hotels Resorts and Palaces has instigated the EARTH (Environment Awareness &

Renewal) program. The hotel has taken the essential step of allocating responsibility to a staff member for identifying environmental risks, recording and monitoring the hotels impacts, and implementing environmental and social sustainability measures.



KEY PERFORMANCE AREAS

REDUCING THE USE OF FRESHWATER AND WASTEWATER GENERATION

The Taj Residency has implemented a number of initiatives to reduce water consumption including treating and reusing wastewater onsite and installing water efficient fixtures.

Initiatives instigated include:

Water efficient fixtures and practice:

Electronic sensors installed on all taps and urinals in the public and back areas to reduce water wastage

Low flow taps and shower roses have been installed in 99% of the hotel

All the hotel's toilets have low flush volumes

Reducing laundry requirements by giving guests the option to have their linen changed on alternate days. Guest preferences are retained in the hotels records and implemented automatically on their next visit

Water recycling:

The hotel's effluent and pool backwash water is sent to an onsite single phase treatment plant where it is treated to a quality suitable for reuse on the hotel's gardens and in the site's cooling tower. This ambitious wastewater recycling project **saves the hotel 15-20kL daily**. Around three quarters of the water savings are reinvested back into the system for maintenance

The hotel's dishwasher collects final rinse water for reuse for the next load's initial wash, **saving 15L each cycle or 9kL annually**

ENERGY EFFICIENCY AND REDUCING GREENHOUSE GAS EMISSIONS

The Taj Residency has improved energy efficiency by reducing equipment operational hours, replacing and retrofitting inefficient equipment and fixtures, recovering waste heat, utilising alternative energy sources and establishing a monitoring and maintenance program to optimise equipment performance.

Reducing operational hours:

Reducing the hours of operation of equipment and fixtures is often a quick and low cost measure that can lead to considerable energy savings. The Taj Residency has implemented a number of initiatives including:

- Reducing the time delay on room key cards that turn off lighting when guests exit the room. Time delays were reduced from 30 seconds to 20-25 seconds
- Installing automatic timers on public and building lights
- Switching off one of the site's three transformers at night to reduce energy loss and increase the transformer life
- Implementing power saver modes on all desk top monitors across the hotel
- Switching off air conditioning in function halls half an hour before guests leave

Heat recovery:

Heat recovery initiatives have also been investigated to help make use of waste heat and reduce energy consumption.

The hotel has installed a heat exchanger to recover heat from the site's air conditioning refrigerant. This heat is used to preheat water used to feed its boiler. By mixing this water with water warmed using energy captured by 100 solar panels, the hotel is able to increase the boiler's feed water from 250C to 400C. This equates to an **energy saving of around 2.22 MJ per day or 52 litres of fuel per day**

Replacing and retrofitting old inefficient equipment:

While the cost of replacing and retrofitting old inefficient equipment can be high, the initial financial outlay is often quickly recovered in reduced operational and maintenance costs

The efficiency of the Taj Residency's air conditioning compressor has been increased by 20% by replacing an old reciprocating plant, which was continually cycling on and off, with a new screw compressor that operates more efficiently at part loads. Other initiatives include:

- Replacing old DC elevators with energy efficient elevators with variable speed drives that can match the motor speed with the load
- Installing Variable Frequency Drive starters to reduce unnecessary energy consumption on the air handling unit motors and chiller secondary pumps so they can operate over different speeds as opposed to a single or two-speed motor starter
- Reducing the environmental impact of fuel use and increasing boiler efficiency by using ultra diesel in the hotel's boilers which has a lower sulphur content which reduces carbon monoxide emissions
- Replacing pumps used for air conditioning and building plumbing with high efficiency pumps that **save approximately 250-300 kWh per day**

Installing energy efficient lighting:

By simply replacing old and inefficient lighting with energy efficient alternatives, significant energy and financial savings can be made. The Taj Residency has installed compact fluorescence lights in guest rooms and corridors **saving 100-150 kWh per day**. Small power supply spikes can reduce the lifespan of these bulbs so the hotel has installed voltage regulators to maintain a constant operating voltage.

Energy efficient 30 watt LED lights have also been installed on the hotel's facade and spa and lighting in the restaurants and lobby area have been connected to solid state dimmer panels which automatically adjusts ambience lighting levels to save energy.



Equipment monitoring and maintenance:

The Taj Residency uses a Building Monitoring System (BMS) to quickly identify abnormalities and inefficiencies in its air-conditioning plant. For example the BMS measures the temperature of chilled water in and out of the condenser to assess the load on the air conditioning plant. This information, in conjunction with the ambient (outside) temperature, is used to optimise the flow of the chilled water. For example when the air is cooler outside the cooling tower will be more effective at cooling water so the water flow rate is reduced, lowering pumping requirements and reducing the load on the compressor

Regular monitoring of the boiler, including adjusting fuel-to-air ratios to ensure efficiency and checking boiler fuel consumption against manufacturer's recommendations. The water tube boiler is de-scaled when fuel consumption starts increasing. De-scaling of air conditioner condenser coils is also regularly conducted and the levels of dissolved solids in the chilled water closely monitored to minimise fouling of the coils.

The Taj Residency has established Total Preventative Maintenance schedules for all their equipment including preventative maintenance such as regular inspections, cleaning and the replacement of worn parts as well as breakdown maintenance which involves establishing a policy on dealing with problems as they occur and ways to reduce their impact on the hotel

SUSTAINABLE PURCHASING TO REDUCE WASTE

The Taj Residency seeks to reduce the volume of solid waste it generates by purchasing supplies in bulk which that are then stored in reusable steel containers. Daily supplies of vegetables are also procured in reusable boxes and water/mineral water supplied and stored in reusable crates.

The hotel gives preference to products and packaging that can be recycled or are made from recycled products. For example, all the hotel's serviettes, tissues, toilet tissues and paper towels are made from 100% recycled paper.



SOLID WASTE RECYCLING

The Taj Residency has a comprehensive solid waste management program with 98% of its waste either reused or recycled. Waste is segregated into dry waste, such as paper, cardboard, plastics and glass and collected by recycling companies authorised by the Pollution Control Board (a Non Government Organisation) at no cost. Wet waste such as food and floriculture waste is collected by a local piggery also at no cost.

All staff are given regular on-the-job training on waste segregation and management and the hotel organises seminars on waste management and other sustainability issues to foster greater environmental awareness amongst its staff and suppliers.

Old cloths and bed sheets are sent to the Friend in Need Society, a home for the aged and destitute.

REDUCING THE USE OF HARMFUL SUBSTANCES

The Taj Residency uses Johnson Diversey cleaning products because the company is committed to environmental stewardship not only in its products but also in the design, production and use. More than 100 of its products have been certified by independent third party groups such as Green Seal, Ecologo, EU Flower and Nordic Swan. The supplier also trains staff in the correct use of its products.

100% of the weedicide and fungal, rodent and insect killers used by the hotel are eco-labelled Bayers products which have been identified as a world sustainability leader using the Dow Jones Sustainability World Index for over a decade. The company has aligned itself with the voluntary 'Responsible Care' initiative of the chemical and pharmaceutical industries and signed the revised Global Charter of that initiative.

All spa beauty products provided to guests are natural and preservative free.

COMMUNITY SUPPORT AND EMPOWERMENT

Taj Hotels and its holding company, the Indian Hotel Company Co Ltd, are committed to serving its many local communities by furthering education and skills training, particularly among rural populations, preserving Indian art, culture and wildlife, and promoting sustainable operations.

Community support and empowerment is considered an important aspect to the Taj Residency's environmental and social commitments. The hotel works with the *Public Charitable Trust* whose charter is to improve the working & economic conditions of rag pickers. It is also involved in ecological sustainable waste management to reduce the threat to public health and environmental degradation.

The Taj Residency has also adopted a slum through *World Vision*. The project primarily involves working with AIDS affected victims. The objective is to create a lasting change in the lives of children, families and communities living in poverty and injustice.

The Taj Residency is also involved in a number of other community initiatives including:

- Assisting an NGO which enables underprivileged youth to 'Learn, Earn and Stand Tall'. This program involves a vocational training centre for the underprivileged youth that offers free three month programs with assured placement at the end of the course. The Taj Residency has taken on three trainees and is providing housekeeping training in its food production departments
- Assisting an NGO working to provide quality education to the underprivileged children of India and employing two trainees in its food and beverage service department
- Assisting an NGO working with rural communities to address issues such as health, education and income generation
- Over 80% of perishable goods are purchased locally and 100% of service contracts are given to local contractors

