

A large, modern hotel building with a central tower and multiple wings, illuminated at dusk. The building features a mix of dark and light panels, with warm interior lights visible through the windows. A prominent entrance canopy is visible on the right side of the building.

SIEMENS

Ingenuity for life

Taj Lands End - The energy efficiency journey begins

Siemens' Demand Flow™ helps offer more guest comfort at lower cost.

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"Demand Flow™ solution installed at Taj Lands End has been delivering sustainable savings. Siemens project team ensured seamless and timely execution as per contract schedule and 100% realization of savings as estimated."

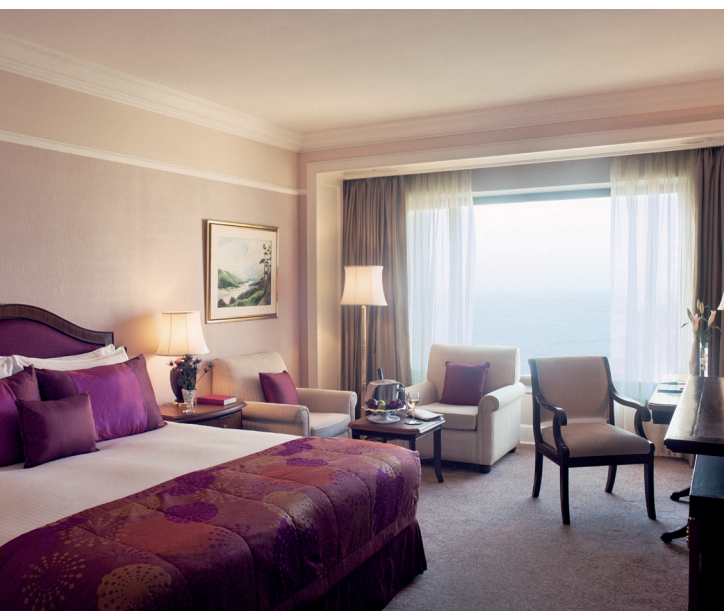
Nilesh Mahajan
Director of Engineering
TAJ Lands End

The Customer

Taj Lands End, Mumbai, offers the best of both worlds - breathtaking views of the sea and the energy of city life. An integral part of the global chain Taj Luxury Hotels, Taj Lands End offers some of the city's finest accommodation and comprehensive conferencing and banqueting facilities. The hotel has 493 rooms, including 33 Suites, among the largest in the city, all overlooking the Arabian Sea. Taj Lands End Mumbai offers an ideal blend of business and leisure, and like all Taj hotels, reflects India's warm and heartfelt traditions of hospitality.

The Challenge

With such a wide array of customer offerings, managing energy consumption and increasing efficiency was the key challenge. How could it be resolved without compromising on unparalleled standards of hospitality? The goal was to optimize performance of the HVAC system, while ensuring the highest levels of comfort and efficiency. The customer was contemplating to replace existing old chillers that were high on energy consumption. But such a solution meant shutting down chiller plant for considerable time, which is clear "no" for the hotel as it operated at nearly fully capacity through out the year.



The Solution

After a detailed collection and careful assessment of energy data, Siemens presented Taj Lands End with Demand Flow™ solution from its Building Technologies portfolio.

As a holistic approach for optimizing the entire chilled water system, Demand Flow™ specialized algorithms can deliver chilled water system efficiencies to any existing building automation system. While conventional offerings in the market cater to the chillers only, the patented Demand Flow™ system is a comprehensive solution for complete chiller plant room. The features include chilled water optimization solution, control and sequencing operation of the entire chilled water plant including the chillers, chilled water pumps, condenser water pumps and cooling towers. It optimizes temperature and pressure set points for chilled water and condenser water, while controlling pump and fan speeds to maintain the optimal energy balance.

Moreover, the solution did not require replacement of the hotels' existing old chillers, as it was independent of chiller make and type. With a planned, micro level shut down and coordination between the Siemens and Taj teams, the solution was implemented smoothly without any inconvenience to the guests or the hotel operations.

The solution ensured saving of more than 15% in the first year and a payback period of around 20 months. Apart from this direct savings, Taj Lands End could also manage peak load rebate offered by regional power utility for meeting energy efficiency levels entailing additional savings. In addition to the energy savings, the guests now enjoy improved cooling and humidity standards.

Highlights

- Energy savings > 15% and greater performance
- Payback period 20 months
- Peak load rebate offered by regional power utility for meeting energy efficiency levels entailing additional savings
- Extended equipment life
- Improved indoor environmental quality
- Simplified system operation

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