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### **Hong Kong's Excelsior Hotel Shows Way forward for Energy Efficiency Financing**

**Hong Kong's largest hotel is demonstrating the increasing adoption by the hospitality industry of performance contracting as a way of financing energy saving initiatives.**

The Excelsior Hotel is owned by the Mandarin Oriental Hotel Group and is located on the waterfront of Hong Kong's Victoria Harbour, opposite the Royal Hong Kong Yacht Club and the famous Noonday Gun. As the largest hotel on Hong Kong Island, the Excelsior features 886 rooms and suites, seven restaurants and bars, a business center and extensive meeting and conference facilities.

The Mandarin Oriental Hotel Group is constantly looking at ways of improving energy management and achieving energy savings in its 41 hotels located in 26 countries throughout the world. As one of its most iconic hotels, the Excelsior is no exception and the Group approached Siemens to see how energy could be optimized in a hotel that has been recognized by Condé Nast Traveller UK as "one of the five most stylish hotels in Hong Kong".

### **Energy Saving Performance Contracting**

Following an audit of the hotel's existing systems, a number of areas were identified where improvements could be made. Energy Saving Performance Contracting from Siemens was adopted as the approach to the project, whereby the new technology introduced to the hotel was financed by the energy savings made. The cost of the project was divided by the guaranteed annual savings to determine the length of the contract, with the loan repayments made through the resulting increased efficiencies.

Upgrades were made to the hotel's chillers to improve their efficiency and to the chilled water pumps and condensing water pumps to achieve a better cooling load. The cooling plant was also optimized, with a system upgrade to the building automation systems and the introduction of an

energy monitoring system to provide the all important means of measuring and verifying the savings made through the adoption of the new technologies.

### **Save energy and achieve substantial cost savings**

In many businesses, hotels in particular, minimizing the impact of installation work on day to day operation is important. Mr Lim Leung, Assistant Chief Engineer, Maintenance at the Excelsior Hotel Hong Kong, comments – “Our primary consideration was to avoid disrupting the daily operations of the hotel, for example, the replacement of the chiller system required the suspension of electricity and water. With proper planning and by dividing the project into stages the hotel was able to maintain operations without disruption.”

The importance of understanding the current energy performance of the hotel in order to have a benchmark from which to improve is another point made by Mr Leung – “Energy audits and studies are continuously conducted in order to identify possible improvements. For example, the recent chiller replacement program was implemented following a feasibility study and detailed review which revealed possible savings. We needed to comprehensively understand our building facilities, regardless of age. Old or new, improvements can always be made, especially in the area of energy savings.”

### **Continuously improving the system**

Once installed, monitoring performance is critical. Mr Raymond Ho, the Excelsior’s Director of engineering and projects, said –“To appraise an energy saving system, we need to monitor it for four seasons. Achieving savings in the summer does not necessarily translate into savings in winter, and vice-versa. To achieve credible savings, the first year of the project is important, with many reviews conducted during those initial 12 months. With this we can further implement various actions to improve the system, and we believe Siemens’ technology, products and services can offer this.”

Potential now exists for adopting a similar approach in other hotels within the Mandarin Oriental Hotel Group, with the experience-sharing and ongoing evaluation of the Excelsior project providing invaluable data.

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