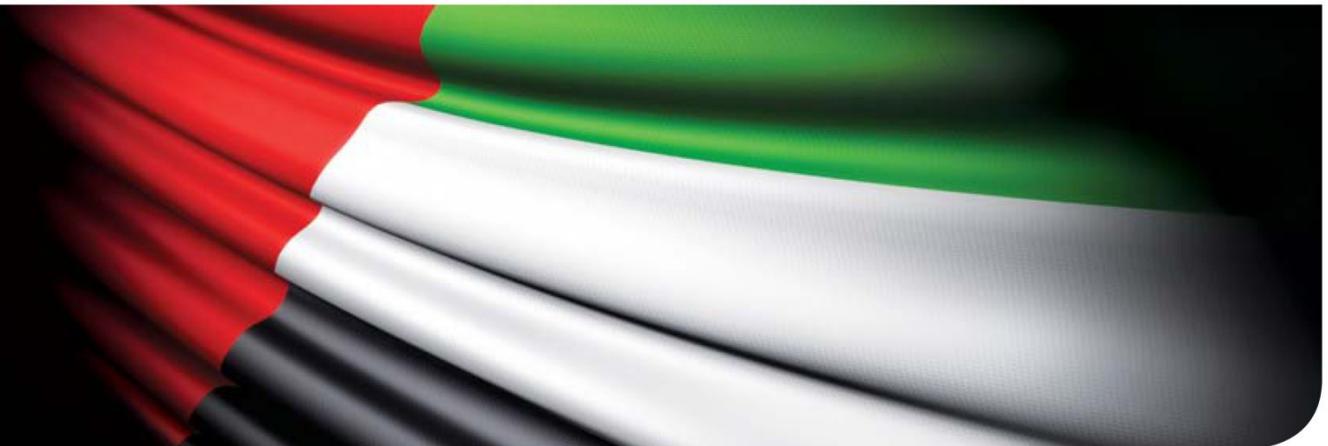




Dunes Hotel Apartments Oud Metha Case study

May 2013



Case study



Dunes Hotel Apartments, Oud Metha was one of the first entities under Hospitality Sector to participate in the Emirates Energy Star programme. As we all know, energy management is complicated for this type of facility due to a fact that occupancy patterns vary. However, we are proud to say that over a period of 8 months, the programme has reduced the electricity consumption by 16% with a payback period of 12 months. I strongly encourage more buildings to participate in this national energy efficiency programme.

- Rochelle Lobo, Group General Manager, Dunes Hotel Apartments

Dunes Hotel Apartments Oud Metha

Approach taken for energy optimization

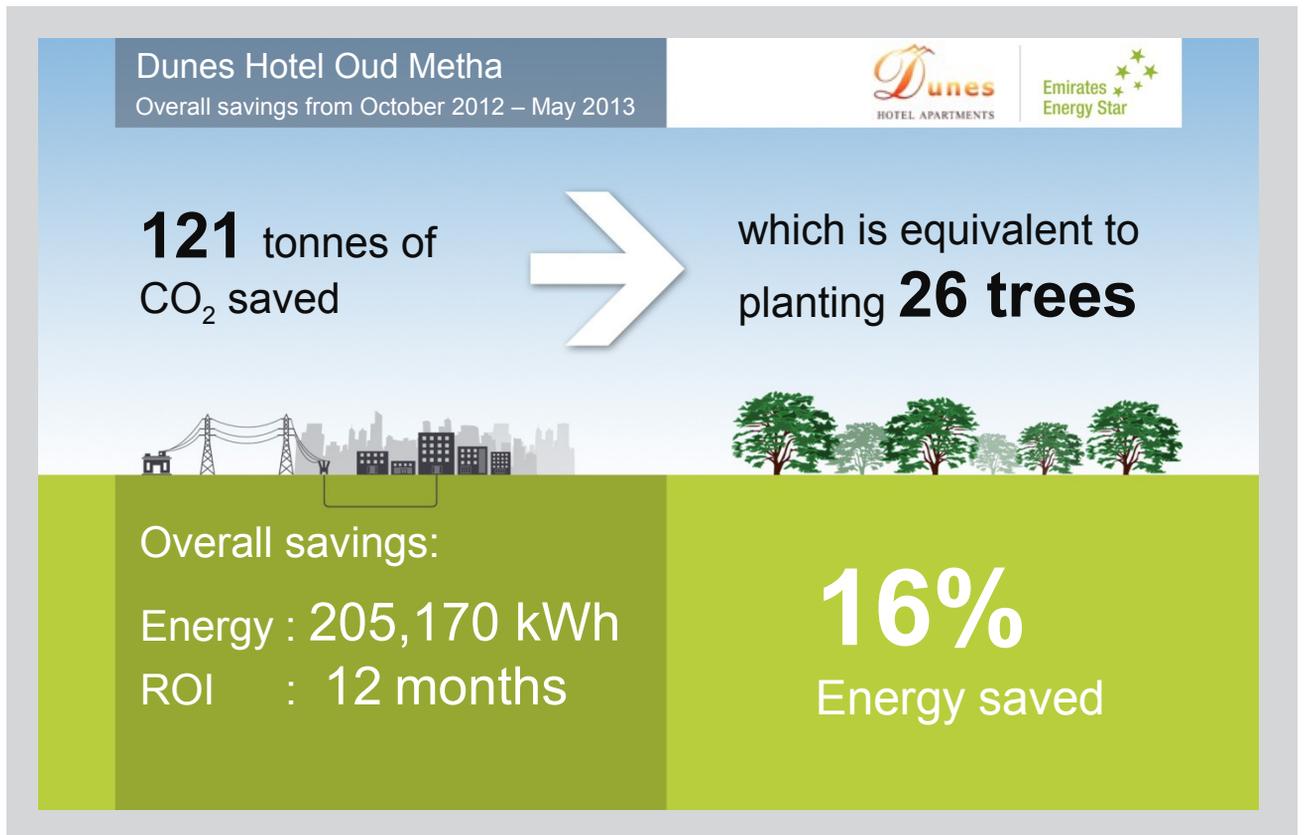
Emirates Energy Star (EES) team surveyed the building and proposed to provide real time remote monitoring and control of the HVAC equipment from Pacific Controls 24x7 Global Command Control Center with objective of optimizing energy consumption in the building and hence reduce electricity bill.

Method of operation prior to energy optimization

During the Pre ECM period, the equipment in the facility were managed manually. FAHUs and Pumps were operating 24x7 and all chillers are running continuously. EES implemented Energy Conservation Measures (ECMs) to optimized the energy performance of assets that would lead to enhanced asset life cycle thus optimizing capital expenditure for retrofits and upgrades.

Equipment	Before EES	After EES
2 Carrier Chillers (220 TR)	<ul style="list-style-type: none">● Operational round the clock● No scheduling● No optimization● No performance monitoring system	<ul style="list-style-type: none">● Chillers set point reset based on chilled water return temperature● Optimum start/stop on FAHU based on occupancy hours● Optimized number of pumps running
1 Carrier FAHU (18.5kW)		
3 Primary Chilled Water Pumps (25 kW)		

Energy savings of 12% predicted from the first stage was achieved as targeted



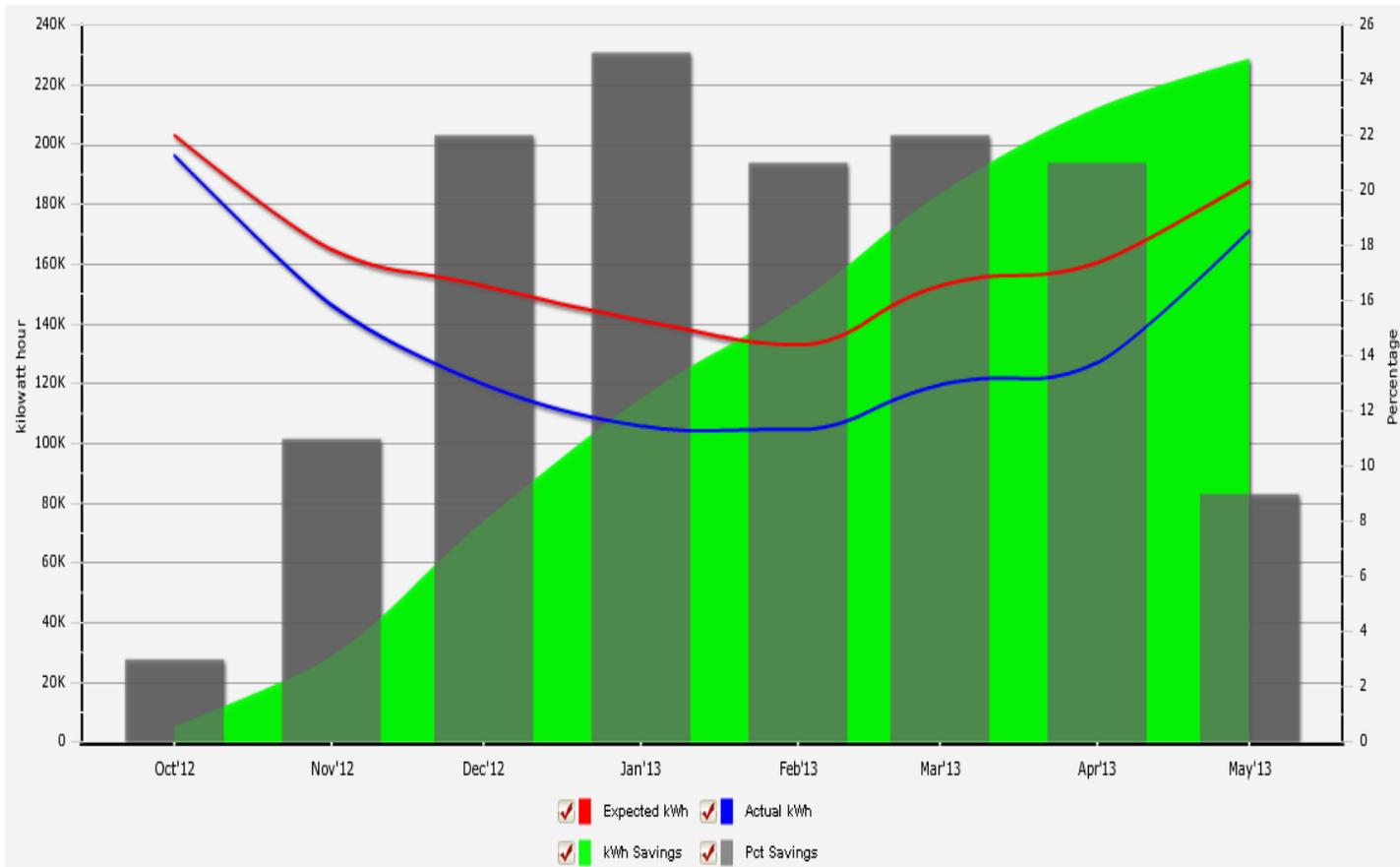
Implementation of ECMs was done in October 2012 for Chillers, Pumps and FAHU.

Summary of benefits obtained

1. Unnecessary running hours reduced, increase in equipment life and decrease in the equipment life cycle cost
2. Reduction in the cooling demand and energy consumption of the building
3. Continuous savings achieved as measured by the comparison to base year energy consumption
4. Real savings of up to 16% achieved
5. Return on investment (ROI) – 12 months

End result

Overall Savings



The above chart shows the overall savings achieved by the facility from October 2012 to May 2013. This clearly shows the energy reduction after the implementation of energy conservation measures.

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