

CASE STUDY

Emirates Post



DOTS Energy Services

Energy Retrofit Program promises EMPOST a handsome 15% of annual savings



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THE CHALLENGE

EMPOST was concerned with high energy bills & the management wanted to operate & maintain the facility in a more sustainable manner. All the system/equipment operated manually irrespective of the demand. Our team conducted a detailed survey and came up with the most technically feasible & economically viable solutions with prime objective to not disturb the operations, indoor environmental quality & occupant comfort. Project was to be deployed with latest IOT & Central retrofit methods.

THE SOLUTION

A performance evaluation along with a survey of the system/equipment was carried out which lead to the design of ECMs listed below.

- ✔ Installation of Demand control ventillation for AHUs
- ✔ Implementation of BMS
- ✔ Installation of Chiller Plant Manager for demand based auto operations
- ✔ Replacement of 3 way to 2 way CHW Valves
- ✔ Installation of VFDs on Chilled water pumps with index point DP sensor
- ✔ Installation motion/occupancy based sensors for lighting
- ✔ Installation of CO sensors for car park ventilation fan operation
- ✔ Shifting from manual to automated operations with appropriate setpoints, operating schedule & night set back modes for various equipment/system
- ✔ Digital metering for continous energy management for monitoring & targeting
- ✔ Training & awareness Program (CSR Initiative)

BACKGROUND

A typical office located in Al Ramool with varied operating hours. BMS retrofit was undertaken as a part of the client’s sustainability policy. The ultimate goal was to have an optimized performance of all the equipment in the facility with automatic operation based on the demand variation.

BUILDING SPECIFICATIONS

Typology	Offices
Location	Al Ramool, Dubai, UAE
Age	10 Years
Building Configuration(m²)	B2+B1+G+3F+Roof (3672)
Major Equipment/System	Air cooled chiller Constant Primary+variable secondary CHW pum AHUs with VAV Ventilation fans Transfer & Booster pumps

THE RESULTS

The solutions implementations was carried out by us which concluded in July 2019. An estimated 15% savings was the outcome based on baseline period condition. Operational verification was performed by a reknowned Sustainability consultant and ensures that the requirement was met.

- Estimated Energy Avoidance: 1563 MWh**
- Estimated Cost Avoidance: 690,000 AED**
- Estimated Annual Savings: 15%**
- Estimated Carbon Reduction: 1016 Tons**

Solution implementation saves the below equivalent GHG emissions from

Greenhouse gas omissions from

CO₂ emissions from

