

DEWA BUILDINGS RETROFIT



PROJECT DATA

31%
reduction of the current
energy consumption, 5 GWh
reduction per year

2.6 Million Dhs
to be saved annually
for DEWA

An investment by DEWA of
16 Million Dhs
paid back through
the savings in
6 years

2,245
tons of CO₂
avoided

6 year contract with
guaranteed electricity
& water savings



OVERVIEW

Dubai Electricity and Water Authority (DEWA) is the government-owned organization producing and distributing electricity and water in the Emirate of Dubai. Through its daily operations, DEWA has always been striving to improve its efficiency and raise its sustainability profile. DEWA already regularly improved its buildings to make them more efficient but to make a significant improvement DEWA gave the task to Etihad ESCO to survey the buildings and prepare an energy retrofit project. Etihad ESCO identified that 7 DEWA buildings could be seriously improved to reduce electricity and water consumptions.

PROJECT BENEFITS

- Significant energy savings and cost reduction to DEWA
- Replacement of old chiller plant by a new efficient one paid by the savings
- Improvement of the DEWA employees comfort conditions in the buildings (air balancing, fresh air, better lighting, etc.)
- Overall improvement of the building equipment

This Energy Performance Contracting project is the first in Dubai and it shows the leading role that DEWA plays in improving its facilities and in showing to other organizations that significant savings can be obtained from buildings using the ESCO model



About Etihad

Etihad, Arabic for “Union” is inspired by the United Arab Emirates legacy that spans over four decades of development and progress. Etihad ESCO is inspiring cross sector actions and partnerships among multiple stakeholders to create and sustain a vibrant market for energy performance contracts. Dubai is one of the leading cities in the world implementing a city-wide strategic buildings energy efficiency program with tangible Social, Environmental and Economic benefits. Etihad’s purpose is to serve the strategic goal of the United Arab Emirates pursuing a green economy for sustainable development by making Dubai a global model of green economy transition through leadership, partnership and adoption of energy efficiency technologies.

About DEWA

Dubai Electricity and Water Authority (DEWA) is the sole provider of electricity and water in Dubai. Established in January 1992, as per decree issued by HH Sheikh Maktoum Bin Rashid Al Maktoum, Ruler of Dubai at that time, Dubai Electricity and Water Authority (DEWA), was formed by merger of Dubai Electric Company (DEC) and Dubai Water Department (DWD).



PROJECT DETAILS

The project consists of improving the energy efficiency for 7 DEWA buildings by installing 55 energy conservation measures. As part of the project, the fresh air injection system in the main HQ building will be refurbished which will provide occupants with a real comfort benefit. Using the Energy Performance Contracting model for a duration of 6 years, DEWA is guaranteed of the results. A 6 year comprehensive maintenance contract is included.

ENERGY CONSERVATION MEASURES

55 energy conservation measures including refurbishment of the old and inefficient air-cooled chiller plant in DEWA Main Office by a new high efficiency water-cooled system, removal of split units, replacement of other chillers, implementation of Variable Frequency Drives (VFDs) on motors and pumps, evaporative coolers on chillers, solar films on windows, variable fresh air flow system with CO₂ sensors, timers and controllers, occupancy sensors for lights, water efficient fixtures, energy management center, etc.

TIMELINE & NEXT STEPS

The project is being executed during 2015 by the ESCO MAF Dalkia Middle East. From 2016, DEWA will fully benefit of its new more energy efficient buildings.

