

DEWA POWER STATIONS LIGHTING RETROFIT



PROJECT DATA

68%
saving from current electricity
consumption, 14 GWh
reduction per year

6 Million Dhs
to be saved annually for
DEWA

An investment by DEWA of
21 Million Dhs
paid back through the
savings in **3.5 years**

6,286
tons of CO₂ avoided

6 year contract with
guaranteed electricity
savings and light levels



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 improved a lot the efficiency of its Power Stations but to do more, it gave the task to Etihad ESCO to search for further improvements in these facilities. After thorough audits, it was identified that the lighting infrastructure of the power stations were aging and a significant improvement could be made there to save energy.

PROJECT BENEFITS

- Replacement of old lighting infrastructure by a new one that saves significant energy
- Better quality lighting through the use of latest LED technology lighting improving the employees working conditions
- Reduction of the lighting maintenance budget to almost zero thanks to long lasting LEDs that do not need replacement or maintenance
- Turnkey contract for 6 years with savings and light levels guaranteed

This first significant lighting retrofit project in Dubai demonstrate the viability and efficiency of the LED technology in achieving great lighting quality and huge electricity savings while reducing the maintenance budget for lighting to almost zero. The Energy Performance Contract signed with the ESCO allows DEWA to be guaranteed of the outcome of the project.

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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 replacing 8,500 existing light points including in certain cases the light poles in the Jebel Ali and Al Awir Power Stations. As part of the project, an equalization and improvement of the lighting levels is made to improve the occupant's visual comfort and security. Using the Energy Performance Contracting model, DEWA is guaranteed of the results both in terms of kWh savings but also light levels for the duration of the contract. A comprehensive maintenance contract is also included to take care of any failure.

ENERGY CONSERVATION MEASURES

The energy saving is coming from new highly efficient LED lights that will replace existing indoor, outdoor and street lights. Guarantee is given on the volume of energy saving (kWh) and on the light levels during the contract duration.

TIMELINE & NEXT STEPS

The project execution by the ESCO, Philips Lighting, is happening during 2015. From 2016, DEWA will fully benefit of the new lights and the significant energy savings.

