

# CASE STUDY

## EMPOWER district cooling plant

### Dubai, UAE

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The intelligent adiabatic **Smart Cooling™** system reduced electricity consumption by **20%** and boosted cooling capacity by **13%** on average at Studio City, Dubai.”

#### CHECKED AND TESTED FOR PROVEN RESULTS

Efficacy assessment has been conducted and validated. Testing was performed with BTU liquid flow and temperature meter RIF600 and Eniscope energy monitoring equipment.

#### CUSTOMER

The Emirates Central Cooling Systems Corporation (EMPOWER) was established to efficiently utilize energy resources through District Cooling Services.

EMPOWER was set up as a joint venture between Dubai Electricity and Water Authority and TECOM Investments, a member of Dubai Holding through a Royal Decree issued by the Ruler of Dubai.

#### CHALLENGE

Launched in 2005, Dubai Studio City is a global business community that provides cutting-edge facilities and services to companies across the broadcasting, film production, TV, music, and entertainment sectors.

Dubai Studio City multi-faceted and sizable facilities provide a continually challenging environment when it comes to cooling. While the structure needs to be kept cool even during searing summer temperatures, electricity consumption must be kept at the highest efficiency levels so operations and services run smoothly and profitably.



#### SOLUTION

With a total cooling capacity of 3MW, Dubai Studio City's cooling facility is equipped with Trane and Carrier chillers, which began operations in July 2019.

Studio City Dubai entrusted the intelligent adiabatic **Smart Cooling™** system to support its cooling facility deliver vital electricity consumption reductions and cooling capacity gains.

**Smart Cooling™** has been installed in all chillers at the Studio City Dubai premises, with immediate and beneficial results.

#### RESULTS

Data from three separate test results shows the intelligent adiabatic **Smart Cooling™** system increased chiller performance by **12.87%** within 24 operational hours and the electricity consumption dropped significantly by **20%** on average.

In this project, the return on investment period (ROI) was of just 7 months.

Additionally, **Smart Cooling™** helps the cooling equipment operate under normal load, with a shorter compressor operating cycle and no overloading. That translates into less technical maintenance and longer equipment lifespan.



COOLING CAPACITY  
INCREASED BY

↑ 13%



ELECTRIC ENERGY  
CONSUMPTION  
REDUCED BY

↓ 20%

ROI  
7  
MONTHS

