SMART COOLING

SIET SWISS INTEGRATED ENERGY TECHNOLOGIES AG

CASE STUDY
DU Al Qudra Broadcasting Center – Dubai, UAE

*"The intelligent adiabatic **Smart Cooling™** system reduced electricity consumption by 15% and boosted cooling capacity by 17% on average at the DU Al Qudra in the Dubai, UAE"*

CHECKED AND TESTED FOR PROVEN RESULTS.
Efficacy assessment has been conducted and validated. Testing was performed with a **BTU** liquid flow and temperature meter **RIF600** and **Eniscope** energy monitoring equipment.

CUSTOMER

The new world-class facility at Al Qudra Site will cater to the growth in demand of satellite TV offering state-of-the-art technology. The new site has larger antennas ensuring robust signal levels in transmission and reception. The new upgraded facility covers an area of 75,000m2 and was built to enable the expanding requirements of DU's customers: to deliver superior service with a focus on service reliability, refined control, and monitoring of the services uplinked from there.

CHALLENGE

As with most commercial buildings, the DU Al Qudra Broadcasting Center suffers from peaks of cooling demand, compounded by the harsh weather conditions in the city of Dubai. With chillers operating at peak capacity, DU's engineers faced mounting operational difficulties.

The challenge was clear: reduce electricity consumption of the chiller during heat season, boost its efficiency and ensure a constant, stable operating mode.

SOLUTION

To prevent the overloading of the plant's cooling equipment, installing the **Smart Cooling™** PRO 10 system was a pressing need. **Smart Cooling™** would allow the Carrier 30XA1702 chiller to produce more cooling capacity and operate more efficiently, even in extreme heat.

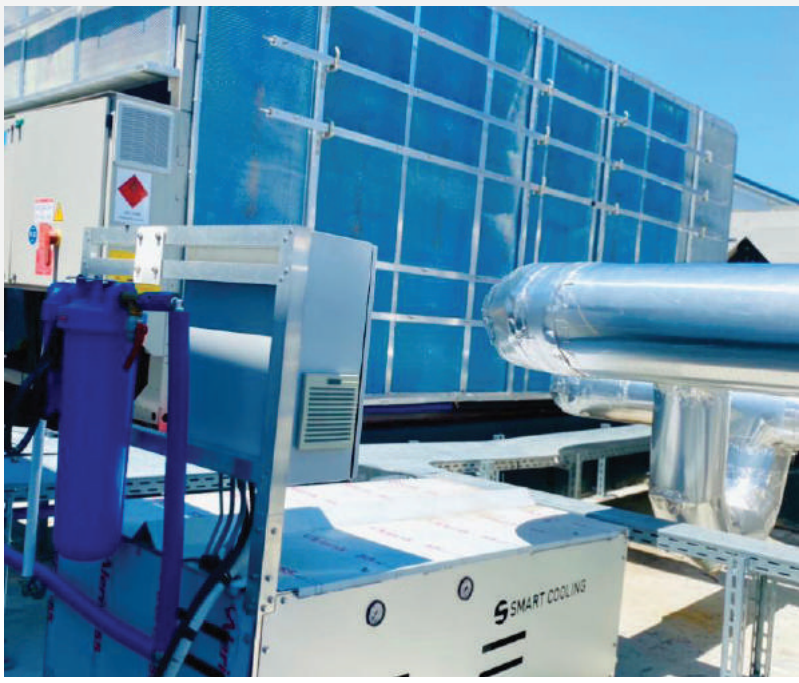
In 2021, DU Al Qudra Broadcasting Center equipped their cooling facilities with the intelligent adiabatic **Smart Cooling™** system. **Smart Cooling™** lowered the air temperature flowing into the chiller, boosting its cooling capacity and significantly reducing its electricity consumption.

RESULTS

Testing was conducted in July of 2021. The report submitted by Du AL Qudra technical staff indicates that After the installation of the **Smart Cooling™** system, the cooling equipment produced noticeably more cooling capacity: 17% on average. Electricity consumption dropped to around 15% on average.

The return on investment (ROI) period of the **Smart Cooling™** system for this project is of only 21 months.

Test results show that the intelligent adiabatic equipment **Smart Cooling™** increased chiller performance by, on average, 14,5% during 24 operational hours.



COOLING CAPACITY INCEASED BY ↑17%

ELECTRIC ENERGY CONSUMPTION REDUCED BY ↓15%

ROI 21 MONTHS

The intelligent adiabatic Smart Cooling™ system is a proven, state-of-the-art cost-saving pre-cooling technology.

- Modular system
- Suitable for all types of dry coolers and chillers
- Easy and fast installation
- Certified system and approved by major cooling equipment manufactures
- Minimal maintenance

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