# CASE STUDY

**Higher College of Technology**

كلّيات التقنية العليا
HIGHER COLLEGES OF TECHNOLOGY

DOTS
DO THINGS SMARTER

## DOTS Energy Services

Al Ain Colleges reduce energy consumption by upto 50% by IOT enabled optimised operations

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# CASE STUDY | DOTS Energy Services

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## THE CHALLENGE

With unreasonably high energy consumption and unusual operational practices, measures were to be designed. The major challenge was that ECMs are to be incorporated without disturbing the college routine operations.
Project comprised of Installation, testing & commissioning of a fully functional EMS (Energy Management System).

## THE SOLUTION

After conducting a performance evalutaion on the controls systems, our team identified the best cost-effective solutions that could be implemented with least time & cost implications

- Installation of energy meters for energy management
- Replacement of standalone thermostats with communicating type
- Implementation of new Building Management System
- Fully automated operations with operation schedule & extensive setpoints (based on application/activity levels) for AC units with night setback mode
- Customised operating schedule for AC units during Ramadan & other national holidays
- Training & awareness Program (CSR Initiative)

## BACKGROUND

The facilities located in Al Ain which are aged over 2 decades underperformed with annual energy consumption for both HCT for Men & Women being exorbitantly high with non-operational BMS and diverged operational philosophy and maintenance strategies

## BUILDING SPECIFICATIONS

| | |
|---|---|
| Typology | Education |
| Location | Al Ain, UAE |
| Age | 22 Years |
| Building Configuration($m^2$) | G+3F+Roof |
| Major Equipment/System | MDB-6 nos.<br>Package units<br>DX Units<br>Ventialtion fans<br>Window DX<br>BMS Tridium Niagara |

## THE RESULTS

After the EMS was installed & commissioned as per project requirement, a month on month kWh comparison of baseline & reporting period was carried out to understand the performance, as illustrated.

**Annual Energy Savings : 35% (Avg)**
**Annual CO2 Reduction : 2884 Tons (Avg)**

Solution implementation saves the below equivalent GHG emissions from