

ADWEA Buildings

BMS Retrofit Case Study

THE CHALLENGE

The project is one of the first Energy retrofit project under Abu Dhabi Water & Electricity Authority. The project scope was to implement energy saving measures for 2 Nos. buildings (ADDC DMS & ADWEC) in Abu Dhabi. This project was awarded to Enova and we had to work with Enova to provide solutions for implementing DDC retrofit for the existing HVAC & Plumbing equipment and to implement metering systems. The existing BMS in these buildings was to be retrofitted/integrated to new BMS and connected to Enova Command Control Center for remote monitoring and energy optimization.

THE SOLUTION

Green Optima provided the solution to retrofit/integrate all the existing DDC Panels with Tridium JACE controllers and IO Modules. All the DDC Panels are connected to Niagara Supervisor and controls strategies with energy saving measures were programmed in the DDCs. Also all the room standalone thermostats were replaced with communicating thermostat and integrated to the Niagara Platform. New meters with low voltage CT's and Modbus connectivity were installed for major electrical panels and integrated to Niagara Supervisor. Each building was then provided with a PC with Niagara Supervisor to operate each building individually from the Niagara Supervisor front end. Each building was then integrated to Enova's Hubgrade Command Control Center with Niagara Protocol (fox) connectivity. Newly Customized Graphics, Histories and Alarms requirement was implemented in the project as per client specifications.

THE RESULTS

A complete BMS with connectivity to Command Control Center for centralized monitoring and optimization of Energy.

Utilising both TCP/IP and MS/TP networks the plant communicates with the site wide integrated graphical user interface and is fully capable of access through the worldwide web.

CASE STUDY FAST FACTS

- Existing BMS:** Siemens & Standalone Thermostats
- Products Used:** Tridium JACE , IO Modules and Tridium Niagara Supervisor
- Total Datapoints:** 2,800
- Type of Building:** Commercial
- Client:** Enova
- Retrofit Date:** 2018
- Location:** Abu Dhabi, UAE

