

RAK Municipality Buildings

BMS Retrofit Case Study

THE CHALLENGE

The project is one of the first Energy retrofit project under Ras Al Khaimah Municipality. The project scope was to implement energy saving measures for 3 Nos. buildings (RAK Municipality Head Office, RAK Food Control Laboratory and Slaughter House) in Ras Al Khaimah. 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 controls in these buildings were 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 requirements were 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: Standalone Thermostats and Controls
Products Used: Tridium JACE , IO Modules and Tridium Niagara Supervisor
Total Datapoints: 2,500
Type of Building: Commercial
Client: RAK Municipality
Retrofit Date: 2018
Location: Ras Al Khaimah, UAE

