

FULLY INTEGRATED BUILDING AUTOMATION SYSTEM? TAKE IT TO THE BANK

Introduction

In an environmentally conscious age, minimising our carbon emissions and overall energy footprint should be in the forefront of our minds in all that we do – not just at an individual level but at a corporate level as well. When you consider then that a building's overall power consumption can be significantly reduced by performing the necessary testing, measurement, verification and resulting corrective actions, it should come as no surprise that organisations are investing more and more resources towards energy management solutions. To successfully implement these measures, it is imperative that experienced and technically capable experts are engaged in this field who understand your needs and how to best address them.

An example of this is the recent building automation and energy metering upgrade project at St George House in Kogarah, Sydney.

Project Overview

Leading building automation systems integrator, Environmental Automation (EA) with the assistance of NHP recently designed, engineered and implemented a fully integrated BMS/EMS system allowing the building management team to gain greater insight into the buildings energy consuming components. With such a comprehensive system and the clarity that it provides, monitoring and reacting to changes in consumption trends enables instantaneous responses where necessary.

St George House has been renovated as part of Westpac Bank's plans to revitalise the building to its full capacity. As part of this project, the building owner engaged EA to implement and manage the upgrade and refurbishment of the building's automation systems including the engineering of the new energy management systems.

As a highly qualified and successful specialist in the building automation, energy management and access control markets, EA rely on similarly likeminded and focussed suppliers of quality products and solutions. With that in mind, Environmental Automation have successfully implemented a number of products and solutions from the NHP portfolio for many years.

"NHP's local engineering capacity; quality of their products and solutions together with their pre and post project support including easy access to reliable advice during a project build made them a natural choice for this project," said EA project manager Greg Smith.

This project required an initial 180 energy meters with an option for easy/flexible future expansion should building or management changes require it. Following in-depth engineering reviews which considered the metering topology, distances involved between networks and the integration with other BMS and EMS networks, the Smart Dupline system from NHP proved to be just what was required for the project. Working alongside Environmental Automations Reliable Controls® BACnet Controllers from the MACH PRO family, integration was easy and seamless.

The Smart Dupline system features, such as Modbus Master to poll the energy meters on a ModbusRTU network and conversion of the meter parameter to BACnet IP objects, allowed the meters to easily and reliably interface with the MACH-System Building Controller.

"Working with Environmental Automation and the end user, NHP was able to offer premium integration using the Smart Dupline system. Designed to sit on the automation level (similar to the HVAC/DDC controller), the system also provided additional features at the field level which appealed to the building owners," said Alex Morris, NHP's Technology Specialist - Automation and Energy Management.

These additional features included native BACnet/IP for communication with BMS/DDC controller as well as DALI modules and KNX interfaces for lighting control.

The Solution

Together, these added features allowed the full integration of energy, water and gas meters in one easily managed solution.

"The installation of the Smart Dupline was very straight forward and its integration into our Reliable Controls system was as smooth as we could have hoped for. The outcomes that we were able to achieve as a result of this were beneficial to all involved both in terms of overall performance and savings in time and money," EA's project manager Greg Smith continued.

"Smart Dupline has provided rock solid dependable energy metering performance from the day each module has been brought into service at the site. Other benefits are increased functionality through other field modules that are available within the system and just as easy to implement," said project engineer James Giannikos.

These can include anemometers and weather stations which the end user could utilise in the building as and when required.



Project Fact File

Project: St George House

Location: Kogarah, New South Wales (Australia)

Details: Design, engineer and implement a fully integrated BMS/EMS system allowing greater insight into the building's energy consumption components.

NHP Products/Services:

- Smart Dupline System
- Help design, engineer and implement a fully integrated BMS/EMS system
- Pre and post project support