

Case Study: International High School

International High School in Malaysia Utilized Billion SEMS to Manage Air-Conditioners for 300+ Classrooms

Malaysia government has been aggressively promoting Green Energy Technology in recent years with the vision to position Malaysia as the Green Energy Technology hub in ASEAN region. Following the launch of “Green Energy Technology Policy” in 2009, Malaysia has been encouraging schools, government units, households and commercial buildings to implement green energy technology to accelerate the economy and sustainability developments. Billion deployed SEMS (Smart Energy Management System) at an international high school in Kuala Lumpur, with the goal to manage the air-conditioning operation for more than 300 classrooms. This school has successfully saved up to 25% energy consumption and reduced 15% labor maintenance cost.

Background Story

Malaysia's climate is categorized as equatorial, being hot and humid throughout the year. The international high school has over 300 classrooms with a standalone AC installed for each classroom. The high school students usually turn the AC on for an entire school day, resulting in significant energy wastages and high electricity bill, especially when the students forget to turn the AC off after leaving the rooms.

Solution

Billion provided Smart IoT Gateway (SG6200NXL), PIR Sensor (SG100T) and Smart Wi-Fi IR Controller to be installed on the school campus to monitor student activities, energy consumption, and the operation status of each air-conditioner. Billion Smart IoT Gateway can collect and transfer the sensory data to backend web-based system in real-time or save instruction in the built-in memory. Billion Smart IoT Gateway served as the core communication device delivering the control command to Smart Wi-Fi IR Controller to adjust air-conditioners' temperature outputs.

The school manager self-defined the AC operation instruction to correspond to environmental temperatures and automatically switch AC on/off per the class schedule on the web-based energy management system. School manager can even remotely access to the power consumption and electricity savings data, as well control the air-conditioners' operations on the provided Smartphone APP.



Performance

By implementing Billion Smart Energy Management System-SEMS, the international school not only has gained a better asset control over its air-conditioning facilities and improved the overall school sustainability image, while largely decreasing the CO2 emission and power consumption by 25%.

Billion Smart Gateway



PIR Sensor



Humidity &
Temperature Sensor



Smart Meter

