



PROJECT AT A GLANCE

CUSTOMER

Hoke County Schools

ABOUT

Located near Fayetteville, North Carolina, Hoke County is a low-wealth, high-growth district with 14 schools.

OPPORTUNITY

HCS needed a plug load measurement, analysis and control solution providing real-time energy usage data and comprehensive scheduling and reporting tools.

SOLUTION

638 Bert Smart Plugs with Measurement, Analysis, Control and Threshold.

RESULTS

Annual kWh Savings:
90,000 kWh

OPPORTUNITY

“There is a famous quote from Henry Ford, ‘If you always do what you’ve always done, you will always get what you’ve always got.’ In other words, you will always get the same results,” according to HCS Superintendent Dr. Freddie Williamson. “We were looking for new ways to better understand our energy usage in order to change our behavior to lower energy expenses”, says Williamson. To do this, HCS wanted a plug load management system aligned with the district’s initiative to become a “21st Century Learning System.”

SOLUTION

Hoke County Schools chose Brady Trane, a family-owned corporation providing single-source building and energy service solutions, for a \$ 6.2 million performance contract which includes the Bert Plug Load Management System along with new chillers, advanced environmental controls, tankless water fountains, weatherization improvements, and new LED lighting.

The district installed 638 Bert 110 M Smart Plugs in 12 of the district’s schools and in the Board of Education building because of Bert’s unique ability to measure actual energy usage real-time. “We implemented Bert so we would have immediate visibility into the plug load usage in our schools.” according to Charles Tapp, Executive Director of Facilities at HCS.

After analyzing their plug load energy usage, the district used the sophisticated control software to create schedules to turn equipment off during nights, weekends and holidays, all times when the buildings are unoccupied. Tapp says, “The real-time data lets us create optimized energy saving schedules for all of our vending machines, laptop charging carts, projectors/smartboards, printers, and water coolers.”

HOKE COUNTY SCHOOLS

"Another thing we like about Bert is the special threshold logic that prevents sensitive equipment like projectors from turning off before they have completed their cooling cycle," Tapp continues.

The district plans to utilize Bert's detailed energy savings reports to verify their plug load energy savings. Available real-time, energy usage data is available at multiple levels and for multiple time periods. Reports can be generated for the entire district, individual schools, groups of schools, individual devices or groups of devices (projectors, printers, etc.). Historical information is available for by hour, day, week, month, year and user-defined report period. Up to three time periods can be compared on each report.

In addition to the financial benefits from energy savings, the district views the new systems as a way to support the district's STEM curriculum. "With Bert and our other energy saving upgrades, our classrooms have become natural laboratories for our students to learn about energy usage and conservation," says Williamson.

RESULTS

By using Bert to turn devices off during non-operational hours, HCS saves 90,000 kWh annually.

THE POWER OF BERT

When it comes to Intelligent Buildings, Bert controls the small things and delivers big. With 30,000 units installed in over 700 buildings, Bert's end-to-end solution typically lowers plug load expense by 40 percent, saving users over 5 million kWh annually.

Using patented technologies and the facility's existing Wi-Fi network, Bert remotely measures, analyzes and controls plug and hardwired loads, ranging from individual 120V/15A devices to 277V/20A circuits. Frequently installed as a standalone solution, Bert delivers even greater value by integrating miscellaneous electric loads to Building Automation Systems (BAS), enabling the BAS to control all building loads and to collect additional measurement, temperature and other building data for increased efficiency and comfort.

Learn how K-12 schools, colleges, offices, local governments and sporting venues save money and energy by visiting www.bertbrain.com.

MEASUREMENT



Real-time energy usage data by device, group, or building for hour, day, week, month or year. Most recent measurement data also stored locally for backup.

ANALYSIS



Administrative software; analyzes energy consumption; runs M&V reports; creates and stores multiple schedules including; School Year, Vacation, Demand Response and Load Shifting

CONTROL



Mass remote control logic turns loads off nights, weekends and holidays when buildings are unoccupied. Plug devices into Smart Plugs and wire circuits with Inline Series Berts to control plug and hardwired loads.

THRESHOLD



Prevents sensitive equipment from turning off until the shutdown cycle is complete or the compressor has turned off.

TEMPERATURE



Real-time temperature data and temperature-based control using high/low set points.