Effective Energy Management for Room Air Conditioners

For many years Operations Managers for campus-type facilities have looked for innovative ways to reduce power consumption across the enterprise. It was a given that room air was a large but uncontrollable load. Today, Friedrich offers the only room air conditioner with factory-installed networking capability that allows two-way communication from each a/c unit and a central monitoring location. This unique feature provides operations, engineering and maintenance personnel the ability to remotely change temperature setpoints, evaluate performance data and monitor alarm messages for room air conditioners throughout the campus. Using the onboard smart controls or from the remote monitoring station, schedules for temperature setbacks or even unit shutdown can provide effective energy reductions in areas when students are not present.

The most energy efficient air conditioner in the world is one that is turned off.

In many schools, most energy management relies on the janitor to turn off air conditioners each night and back on each morning. In reality, this is a poor energy management program at best. The Friedrich Kühl room air conditioner uses WIFI or mesh network technology to link all the units back to a central monitoring location where a scheduling routine can be implemented insuring that all the units are turned up or off at the



appropriate times. The next morning the units can be turned back on to have the rooms ready for students to arrive. This feature alone can yield a 40% reduction in energy.



The Kühl networking capability allows school personnel to monitor and control every window air conditioner from a central point. What an advantage it would be to come in each morning and check for alarm conditions – being able to write work orders and dispatch maintenance personnel before the students arrive and the teachers complain about their classroom environment. The alarm feature provides an early warning against problems that could lead to catastrophic failures. Maintenance is more effective when it can be planned.

The Kühl also saves energy by offering a temperature settings lockout – a present bandwidth, high and low temp, can be set and locked. No matter to what temperature someone in the classroom or dorm tries to adjust, the unit will only respond within the set bandwidth. Even if the a/c units are provided with an inroom thermostat, the operating bandwidth can be set and locked. This feature

provides significant energy consumption savings and reduces maintenance calls. To further enhance these energy saving capabilities, Kühl air conditioners can be grouped by floor, wing, building, east side or west side, etc. and controlled independently to create the most effective energy management strategy possible.

In many urban areas across the country Demand Response has become an important part of a school's energy management program. Many cities have older power grids or limited capacity. Friedrich Kühl can be linked directly to the local utilities

demand response system and provide a campus wide response to a demand event. In most cases this capability allows the school to take advantage of significant incentives offered by the state and local utilities by reducing the campus load demand on the power grid. By helping the utility reduce its demand, they can dodge high peak demand charges and avoid load shedding conditions. Everybody wins. Sustainability Managers across the



country are continuously searching for ways to reduce energy, save money and make their campuses more environmentally friendly. Friedrich Kühl air conditioners are WIFI capable.

For more information about Friedrich Kühl brand air conditioners contact: Brad Clancy, Concept Equipment Corp email at: <u>mailto:info@conceptac.com</u> call 781-721-0123