



# Michaels Engineering Energy Brief

## ENERGY MANAGEMENT CONTROL SYSTEMS

### SUGGESTIONS...

Do you have certain Energy Efficiency topics you'd like to know more about? Send an email with your suggestion to the author listed below and your topic might become a future Energy Brief!

### DID YOU KNOW...

...You can typically achieve 85% of the energy savings for 33% of the cost.

### MEET THE AUTHOR



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### ➔ EMCS RETROFITS FOR ENERGY SAVINGS

Installing an Energy Management Control System (EMCS) in many existing facilities can pay for itself if the design selectively captures cost-effective points, and the user is vigilant about using this powerful tool.

For buildings with pneumatic controls it is not necessary to convert everything to digital controls when installing an EMCS. You can typically achieve 85% of the energy savings for 33% of the cost of complete system replacement by first focusing on installing scheduling points and otherwise leaving the pneumatic system intact. In some cases where more sophisticated control sequences can save a lot of energy, like adding CO<sub>2</sub>-based ventilation control for gyms, cafeterias and auditoriums, it may make sense to convert those units to full digital controls.

An EMCS can effectively control systems such as ventilation, unoccupied temperature setback or setup, and circulation pumps for hot water and chilled water. The EMCS enables the facility manager to control these systems easily with a user-friendly interface, usually accessible from any web browser.

The person in charge of the scheduling must be eager to save energy. Often times we notice that operating schedules for an installed EMCS have been set for much longer periods of occupancy than is necessary because the EMCS interface is archaic, schedules are difficult to change, and the person responsible doesn't want to deal with occupant complaints. Many times customers tell us the controls contractor needs to make a service call or log onto their system to adjust settings. This defeats the control system's purpose, which is to give the customer control of their facility because they are most familiar with the daily activities. It also costs a lot in contractor fees and greatly limits energy savings potential.

### ➔ ADDITIONAL CONSIDERATIONS

\* Be sure to select a controls contractor and brand that you trust. Despite the claims, Brand X controls do not interface well with Brand Y. Once the "back-bone and the brains" of the system are installed, the company who installed it has a huge advantage over the competition, which can leave you vulnerable.

\* Consider retrocommissioning of equipment along with an EMCS installation. Retrocommissioning provides an independent verification of proper installation and functional testing as well as training of the operators to ensure they are comfortable with the system.