



RUSSELLVILLE SCHOOL DISTRICT | CASE STUDY

An Alerton energy management system earns top grades for energy savings in 9 Russellville School District campuses

The Russellville School District in Russellville, Arkansas, is composed of six elementary schools, a middle school, junior high, and a high school. The District educates more than 5,000 students each year and has the largest K–12 budget in Pope County. There are many unique features to the Russellville Schools, including computer labs in the elementary schools and a 2,000-seat performing arts center in the high school. When it came time to retrofit the existing control systems, the District tapped Northwest Controls, its local Alerton dealer, to install a new energy management system (EMS), and funded the project through the American Recovery & Reinvestment Act (ARRA).



The Alerton EMS efficiently conditions the unique spaces in Russellville School District campuses, including the high school's performing arts center.

The biggest challenge facing Northwest Controls was helping the faculty adjust to narrower setpoint ranges in the temperature of their rooms, and

introducing re-circulated air where it had not been used before.

Northwest Controls installed Alerton Building Suite front-end software to replace the existing dysfunctional system and manage the HVAC across nine schools in the district. The Russellville School District EMS centralized control of the HVAC operations using 15 BACtalk control modules (BCMs) to integrate more than 700 rooftop package units, more than 40 exhaust fans, a heating water plant, boilers, freezers, and coolers. Alerton Building Suite also provides remote monitoring and control for the facilities staff to access data for any school, from anywhere, at any time.

The new EMS retrofitted 1.5 million square feet of air conditioned area using Alerton direct digital control (DDC) programming through unitary controllers. The DDC enables maintenance supervisor Kenneth Braeutigam and his staff to more precisely monitor temperatures, setpoints and energy consumption throughout the classrooms, libraries, faculty offices, cafeterias, gymnasiums, and other spaces.

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Web access through the Alerton EMS enables the facilities staff to view building data to effectively monitor and control the system from anywhere, at any time.

Using the Alerton EMS to monitor freezers and coolers in all the schools—and establishing notifications when temperatures go out of range—enables the Russellville School District facilities staff to reduce food and beverage spoilage. Food Services composes more

than \$2M of the District's total expenditures¹.

Using the web-enabled accessibility, Braeutigam and his staff can access school data and receive notifications even outside regular operation hours. From a central location, one technician can diagnose and quickly address any issue that arises. Braeutigam can also invite Northwest Controls to access the Russellville School District system to take a look remotely to help him troubleshoot systems.

Before installing the Alerton EMS, the Russellville School District building systems ran 24/7. Today, Braeutigam can quickly and easily set up schedules for any school, whether it is a middle school or high school function, extra classroom hours, cafeteria operations, or holidays. The schedules—in addition to reducing system runtime to one-third of its former operations—have generated energy savings of approximately 17% to date; Braeutigam expects to hit even higher savings soon. Running the

system for fewer hours also enables the District to reduce wear and tear on equipment.

The user-friendly Alerton EMS enables faculty to more quickly accept and adapt to the new system, including the procedures for scheduling equipment and adjusting temperatures. With Northwest Controls, Braeutigam can manage faculty expectations while getting their support on the new, energy efficient operations.

With more than 500 service calls a year, Braeutigam is saving thousands of dollars a year by using remote access to more quickly address the individual calls and reduce the number of man-hours it takes to resolve each one. The Alerton EMS also enables the facilities staff to more easily troubleshoot service calls and system alarm notifications.

Although another building system was in place before the retrofit, it was dysfunctional and unable to centrally control all the schools in the district. Braeutigam also had difficulties getting the system serviced. For him and his staff, the relationship with the service provider was just as vital as the system itself.

"Yes, Alerton is an excellent programming and controls system, but if you don't get good service, it becomes useless real quick," Braeutigam said. "Northwest is professional, on the spot, I have good contacts over there, and I can call any time. I get answers and resolutions right then."

¹ Russellville School District Budget

