Smarter Small Buildings Campaign

BAKERSFIELD COLLEGE

Small Building Controls Energy Justice, Diversity, Equity, and Inclusion Success Story

Bakersfield College

Established in 1913, Bakersfield College is one of the nation's oldest continually operating community colleges. The College serves 33,000 students annually on the 153-acre main campus in northeast Bakersfield, California. The College holds designation as a Hispanic Serving Institution and is located in a tract deemed disadvantaged by the Climate and Economic Justice Screening Tool. The College has launched two HVAC controls projects that will enable them to better serve their community.

The controls allowed us to optimize our HVAC operations significantly. By lowering our energy usage, we've not only contributed to a cleaner environment but also freed up resources that can now be allocated to support our educational programs and student services. This is particularly meaningful in a disadvantaged community like ours.

- Marcos Rodriguez
Bakersfield College
Executive Director, Facilities & Operations

Welcome Center Controls

The Welcome Center at Bakersfield College was updated to serve as a student-centric one-stop-shop for their academic needs. In addition to improving the building envelope, they installed a new HVAC system with increased zoning and occupancy controls which replaced their outdated pneumatic controls. Now students can more comfortably meet with counselors, pay tuition and sign up for classes.

Lessons Learned

Before the renovation, the HVAC systems in the Welcome Center would have to be started as early as Sunday morning in order for the building to reach the desired temperature for operation on Monday. Now, with the improvements to the building envelope, HVAC system and controls, the lead-time for the building to reach the desired temperature set-point is only one hour before occupancy.

Keep staff happy & manage energy wisely: each Variable Air Volume zone has a thermostat with +/- 3°F adjustment so staff can adjust their local temperature.

Coming Soon

The Child Development Center Building at Bakersfield is part of a demonstration project for "HP-Flex," an open-source, integrated, advanced heat pump load control system. The project kicked off in early 2024 and they expect to see energy savings from the high efficiency equipment and innovative controls strategies. The control system optimizes energy use based on building owner/occupant preferences, while simultaneously responding to dynamic electricity pricing, and utility demand response signals.

In addition, Bakersfield College plans to increase submetering on campus to have more insight into building energy use, energy savings, and which buildings may be wasting energy during holiday closures.

Quick Facts

Controls Provider:	Johnson Controls
Project Location:	Bakersfield College; Welcome Center
Building Type:	Education
Building Size:	12,000 ft^2

The Smarter Small Buildings Campaign is a program sponsored by the US Department of Energy to promote the implementation of enhanced controls and monitoring for small and medium commercial buildings. The Campaign accelerates the deployment of improved HVAC to advance comfort and savings through technical assistance, best practice resources, and peer exchange. Find out more at ***SmarterSmallBuildings.lbl.gov***