

ENERGY PERFORMANCE CONTRACT CASE STUDY

Berkeley County Schools

Phase 1: 2017 | Phase 2: 2020 | Phase 3: 2024



AT A GLANCE

Energy Conservation Measures

- ◆ Seven schools received new geothermal HVAC systems
- ◆ 18kW DC of solar panels installed at Martinsburg Sports Facility
- ◆ New direct digital HVAC control systems to monitor, diagnose, and troubleshoot HVAC systems at 34 buildings

Project Stats

- ◆ Cost of Project
 - Phase 1: \$28,276,000
 - Phase 2: \$5,230,000
 - Phase 3: \$17,092,650
- ◆ Annual Energy Savings: \$2,557,007
- ◆ Rebates: \$300,250
- ◆ Awards: ASHRAE Region VII Technology Award – First Place



PROJECT OVERVIEW

Located in West Virginia, Berkeley County is the second largest school district in the state and their fastest growing school system. The Berkeley County Board of Education partnered with CMTA to renovate 35 buildings across the district, comprising more than 2,543,000 square feet. CMTA was able to fully renovate seven buildings with geothermal heating and cooling, provide substantial renovations for five buildings, and make meaningful improvements to all 35 buildings in the school system to generate excess savings and supplement the school district's budget.

- New boilers at Pikeside Learning Center, Martinsburg High School, and Musselman High School
- New chillers at Martinsburg High School and Musselman Middle School
- LED lighting replacements and retrofits to 23,436 fixtures, with additional switching added in 7 schools
- Computer power management for 12,000 district computers
- Plumbing fixture replacements or retrofits for 1,741 fixtures
- Envelope improvements such as spray foam insulation at 4 schools, weatherstripping for 157 exterior doors, and caulking for 596 windows
- Commissioning of all HVAC systems installed in this project, as well as 4 existing buildings
- All dollars procured via utility rebates and incentives were returned to Berkeley County Schools
- CMTA recently entered into a Phase 3 contract to renovate six additional schools over Summer 2024 and Summer 2025

EPC PROJECT HIGHLIGHTS

- Energy consumption in the geothermal renovation schools has been cut by 75% and overall district energy has been cut by 43%. The geothermal renovations operate in the low 20 EUI range.
- Six geothermal renovations scored a perfect 100 in the ENERGY STAR program, meaning these schools are in the 100th percentile for energy efficiency. These six schools are the first in the state of West Virginia to score in the 100th percentile, making them the most energy efficient school buildings in the state.



CMTA



"Hiring CMTA was one of the best things we have ever done as a school district."

Dr. William Queen

Chair, Board of Education, Berkeley County Schools



COLORADO
Energy Office