

ENERGY PERFORMANCE CONTRACT CASE STUDY

Denver Public Schools
2016 - 2022



AT A GLANCE

Energy Conservation Measures

- 5 MW of solar PV
- LED Lighting retrofits
- Boiler replacements
- Chiller replacements
- Building controls upgrades
- HVAC system enhancements
- Irrigation controls

Project Stats

- Phase 1 Cost of Project: \$8,353,239
- Phase 2 Cost of Project: \$31,399,926
- Energy and Operational Savings: \$1,650,000/year (over two phases)
- Utility Rebate: \$20,741



PROJECT OVERVIEW

Denver Public Schools (DPS) partnered with McKinstry to implement a multi-phase Energy Performance Contract (EPC) aimed at improving energy efficiency, indoor air quality, and learning environments across its facilities. Phase 1 focused on Montbello High School, where outdated HVAC systems and lighting were upgraded, resulting in 25–30% energy savings and \$153,391 in guaranteed annual savings. The \$8.35 million project was completed on time and under budget, with no change orders, and was funded through the district's bond initiative.

Phase 2 expanded the initiative to 27 buildings and 17 additional sites for rooftop solar PV installations. With a total investment of over \$31 million, this phase introduced major HVAC upgrades, lighting retrofits, and 5 MW of solar capacity, delivering approximately \$1.5 million in annual savings. In response to the COVID-19 pandemic, DPS also conducted indoor air quality assessments across 176 schools, evaluating over 4,800 HVAC components and addressing 1,605 issues to ensure safe in-person learning. McKinstry provided engineering support and procurement guidance to maintain optimal air quality and system performance throughout the district.

EPC PROJECT HIGHLIGHTS

- Spanning two phases, the project covered 28 buildings and over 4 million square feet
- Installation of 5 MW of rooftop solar PV across 17 sites, designed in-house by McKinstry, with a 12-year simple payback
- Over 4,800 HVAC components were assessed across 176 schools, uncovering 1,605 issues and leading to targeted repairs and system optimizations



"I highly recommend McKinstry... they nailed Montbello. There's no other contractor in the Denver area who could have completed this scope, budget, schedule, and deliver on time."

Scott Sands, Construction Project Manager

Denver Public Schools



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