

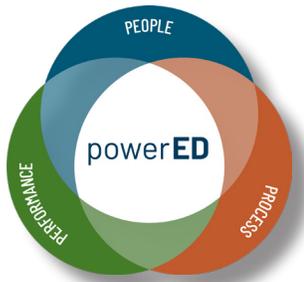


# Washoe County School District powerED

## Project Overview

Washoe County School District (WCSD) is the second largest school district in the state of Nevada with approximately 62,000 students enrolled in 102 schools. Like many large school districts, WCSD faces several challenges such as under staffing, budget deficiency, critical maintenance needs and very limited funds to cover operational expenses. In 2016, WCSD partnered with McKinstry to improve the educational environments and decrease energy consumption in 106 buildings through an Energy Performance Contract (EPC) approach.

In addition to the technical side of energy efficiency such as mechanical and system retrofits, WCSD recognized the power of engaging the occupants in order to further their energy goals. The district decided to implement powerED, McKinstry's behavior-based program designed to systematically reduce costs, increase energy efficiency and promote environmentally friendly operations.



*The powerED program uses a highly collaborative approach with three key elements of focus: People, Process, and Performance.*

The McKinstry powerED team customized each of these three modules within our proven project approach to best engage WCSD's students and staff, and meet the unique needs of the district.

**PEOPLE** - A limited version of the People module was implemented to support WCSD's ongoing relationship with Envirolution. McKinstry provided staff training on the performance dashboard, and the students got involved by leading the ENERGY STAR® certification.

**PROCESS** - This module was used to identify and implement low and no-cost operational and maintenance strategies to reduce energy usage. PowerED engineers conducted thorough assessments of all WCSD facilities to determine potential improvements and collaborated with district staff to understand the operational requirements of the buildings (occupancy, schedules, system requirements, etc.) prior to making recommendations to increase overall building operating efficiency.

**PERFORMANCE** - The Performance module was focused on tracking and reporting energy usage over time. This module provided ENERGY STAR® benchmarking, utility tracking and measurement and quantification of program efforts including implementation of energy efficiency measures and tracking of realized savings.

## SUCCESS BY THE NUMBERS

### Phase 1

August 2018 - July 2021

33 Facilities

338 Savings Opportunities Identified

Guaranteed Savings: \$119,671

**Actual Savings: \$286,185/yr**  
(239% of goal)

### Phase 2

March 2019 - June 2022

35 Facilities

387 Savings Opportunities Identified

Guaranteed Savings: \$95,221

**Actual Savings: \$287,183/yr**  
(451% of goal)

### Phase 3

November 2019 - October 2022

37 Facilities

227 Savings Opportunities Identified

Guaranteed Savings: \$80,066

**Actual Savings: \$311,239/yr**  
(480% of goal)



## FACILITIES

McKinstry's engagement with the district for the powerED program began in August 2018 with a series of initial site walks on 33 facilities, which included 22 elementary schools, 5 middle schools, 4 high schools, and 2 administrative buildings. Phase 2 began in April 2019 with initial site walks of an additional 35 district facilities, including 23 elementary schools, 5 middle schools, 6 high schools, and 1 administration building. Finally, Phase 3 began in October 2019 with the final 37 identified facilities, including 22 elementary schools, 4 middle schools, 6 high schools, 2 administrative buildings, and 3 new schools built in 2020.

## ENERGY REDUCTION LEADS TO COST SAVINGS

Like many school districts around the country, energy costs have a major impact on the budget of WCSD. In 2018, these costs reached all all-time high for WCSD at over \$8,000,000 annually. Following McKinstry's EPC project, which included LED lighting improvements, and the successful execution of 3 phases of powerED, overall utility costs are down \$1,660,000 (approximately 20%) despite rising utility costs and the addition of 6 new schools in the district.

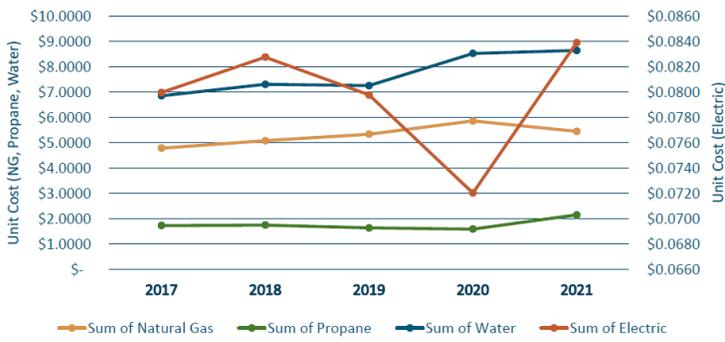


Image 1. District Utility Unit Costs (2017-2021)

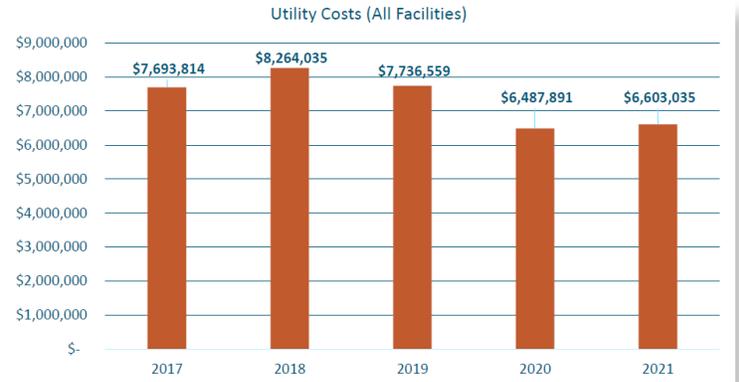


Image 2. District Energy Usage (2017-2021)

## FINDING PERMANENT SOLUTIONS TO LONG-TERM ISSUES

The key to the impressive savings of the powerED program at WCSD is the implementation of energy savings opportunities. At the completion of three phases powerED engagement, a total of 952 savings opportunities had been identified. The district has been enthusiastic about executing these suggested changes, with 412 savings opportunities being implemented to date - representing **43% of all opportunities over all three phases**. The district also plans to implement additional opportunities in years to come, which will only further increase the energy and utility savings to WCSD.

Jason Geddes, the district's energy and sustainability manager, emphasized the success of the powerED program, saying,

“The powerED program has led to **substantial operational and utility cost savings** while serving as an educational tool for our students. The improvements gained from moving to cloud-based facility management will ensure our buildings are efficiently maintained and **ready to serve our community**, and that learning environments are consistently properly ventilated, heated and cooled for **optimal student learning**.”

