

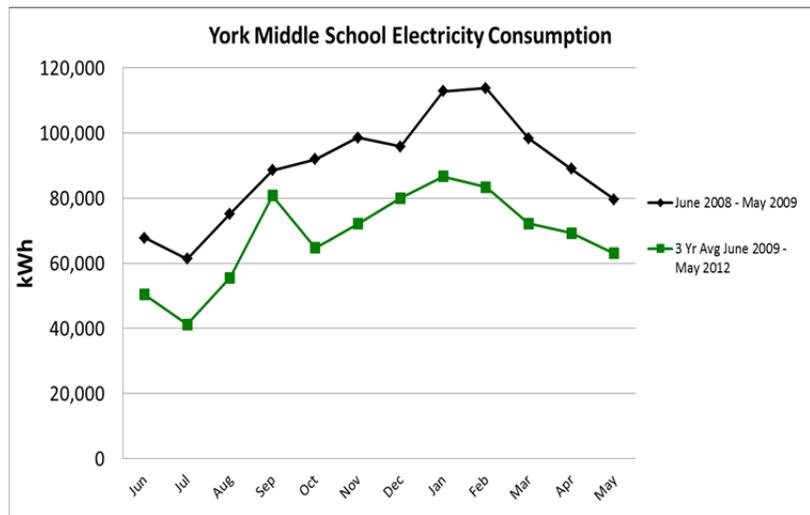


York Middle School Energy Efficiency

Project Overview

York Middle School educates over 250 6th – 8th grade students in York, Nebraska. The middle school building was constructed in 2007, and utilizes many energy efficient technologies, including: ground source heat pumps serving the heating and cooling needs of the entire facility; energy recovery ventilators for delivery of outside air; circulating pumps with variable frequency drives; energy management system (EMS) to schedule operation of the equipment and to allow adjustment of temperature settings; and occupancy sensors to control classroom lighting.

Even with these energy efficient technologies in place, the school's energy performance did not meet the expectations of administrative staff. Initial benchmarking in May 2009 using the ENERGY STAR Portfolio Manager tool returned a baseline rating of 67 – above the national average but not high enough to earn the ENERGY STAR label. The Nebraska Public Power District (NPPD) conducted a survey – a process that revealed that efficiency gains could be realized through improved operations and other low cost practices. Optimized HVAC scheduling, temperature setpoint changes, and improved control of circulating pump variable frequency drives were among various measures that were recommended to produce energy savings. The energy savings amounted to a 22% reduction in total electricity consumption from June 2009 – February 2010, as compared to the same period the year before. By early 2010, only 9 months after the initial benchmarking, York Middle School earned ENERGY STAR by achieving a performance rating of 80 in Portfolio Manager. This dramatic increase in energy efficiency translates into real savings for York Public Schools.



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Summary of Building Energy Performance

The chart above compares “before and after” energy consumption, revealing significant energy savings.

The table below shows the actual savings realized during the first year of operation following implementation of the Energy Conservation Measures.

	June 2008 – May 2009 (Baseline Period)	June 2009 – May 2010 (Post Implementation)	Savings
Annual Electricity Consumption	1,073,000 kWh	857,800 kWh	215,200 kWh
Annual Electricity Cost*	\$58,769	\$46,530	\$12,239

*Calculated using 2009 – 2010 average price for electricity