

Columbia Public School District

Energy Savings Performance Contract (ESPC)



The Columbia Public School District is comprised of 30 school buildings. Many of these schools are older facilities that were constructed without central air conditioning. The district wanted to hold summer school for elementary school students and needed a way to keep the students cool during the hottest days of the year.

RWE Clean Energy, through its subsidiary, Custom Energy Services, recommended installing ground-source heat pumps in the schools. Ground-source heat pumps are one of the most environmentally-friendly and energy efficient ways to heat and cool a building, using the relatively constant temperature of the earth to provide heating and cooling. The team proposed an aggressive project schedule that would have air conditioning in place in two schools in time for summer school. They successfully met the proposed construction schedule and the school district was able to hold summer classes in those two schools.

ENERGY CONSERVATION MEASURES

Building Controls

- Energy management system

Renewable Energy

- Ground-source heat pump

Building Envelope

- Roof replacement
- Window Replacement

Additional Upgrades

- Electrical power distribution
- Central air conditioning



PROJECT DATA

LOCATION

Columbia, MO

CONSTRUCTION DATES

November 2007 to October 2008

CAPITAL COSTS

\$14,109,853

ANNUAL SAVINGS

\$150,409

ENVIRONMENTAL BENEFITS

612 tons of harmful greenhouse gas emissions reduced annually

- Preserving 3.9 acres of forest from deforestation* or
- Conserving 1,291 barrels of oil*

*Sources:

- Leonardo Academy's Cleaner & GreenerSM Emissions Reduction Calculator: <http://www.cleanerandgreener.org/resources/pollutioncalculator.html>
- U.S. Environmental Protection Agency, Greenhouse Gas Equivalencies Calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>