

Midwest Region Alternative Fuels Project



MO-LSR7

Metropolitan Energy Center

www.metroenergy.org

Kansas City Regional Clean Cities



LEE'S SUMMIT
R-7 SCHOOLS
Learning for Life



U. S. Department of Energy



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Project Profile: Lee's Summit R-7 School District

In 2010, Lee's Summit R-7 School District (the District) celebrated the achievement of becoming the first public school district in the United States to operate an all-electric distribution fleet in all primary routes. This groundbreaking effort by the district to reduce carbon emissions also saves money for local schools. The 4 Smith Electric Vehicles Newton delivery trucks are used to transport items such as school supplies and cafeteria food products from the district's warehouse to schools and other facilities. The all-purpose delivery trucks also provide an "in-house" mail delivery among all R-7 facilities. The District has been working on reducing costs and its environmental footprint for several years, and its fleet was the next step.

The district's electric trucks each required a dedicated charging/parking station, which necessitated building 4 custom charging stations at the district's warehouse, where the trucks are domiciled, and 1 custom charging station in the maintenance building.



Benefits

The electric trucks are manufactured in Kansas City at Smith Electric Vehicles and have less than five total moving parts, dramatically reducing maintenance expenses. More dramatic will be the reduction in operating costs related to fuel expenses. In 2009-10, the R-7 School District fuel expenses for the distribution fleet averaged \$2.25 per gallon. The district estimates the energy cost to operate the electric fleet at 11 to 15 cents per diesel gallon equivalent, equating to an average savings per gallon equivalent of \$2.12, and much more at today's prices.

Together, the 4 trucks contribute a projected lifetime petroleum fuel displacement of more than 80,000 gallons, calculating to \$312,000 in fuel savings using today's prices. In addition to the cost savings, the electric trucks will substantially decrease the distribution fleet's total carbon emissions to near zero, positively contributing to healthy ambient air quality within school zones and surrounding neighborhoods, while reducing noise from the trucks. The resulting emissions benefit is projected to be 60,000 fewer pounds of local air emissions.

Funding

The District received funding from the Midwest Region Alternative Fuels Project for the electric trucks and custom charging stations.

Electric stations: 2

Electric vehicles: 4

**Gallons of gasoline displaced:
4000 / yr**

Total project cost: \$1 mil

Federal funds: \$500,000