



Electric School Bus Funding Strategy: Partnerships

Project Overview

Great River Energy, Dakota Electric Association, and Schmitt & Sons partnered to bring a battery electric school bus to Minnesota. The bus will be powered by 100% renewable (wind) electricity and will begin operating in September 2017.

The school bus is an all-electric Type C eLion with five battery packs and an estimated range of 100 miles. The bus is also equipped with an auxiliary heater, thermos passenger windows, heated mirrors, camera wiring, and LED lights, among other features. The price of the bus was \$366,000, not including tax and delivery.

The electric school bus will be operated by Schmitt & Sons, a private school bus operator and deployed at the Lakeville Independent School District, a suburban school district south of Minneapolis.



Funding

Funding for to purchase the electric school bus and charging infrastructure was raised through a three-way partnership:

- **Great River Energy** is a not-for-profit electric cooperative owned by 28 electric distribution cooperatives. As a wholesale power provider, Great River Energy generates and transmits electricity for its member cooperatives, who distribute (or supply) electricity to individuals and businesses.
- **Dakota Electric Association** is a not-for-profit electric distribution utility that owns and manages the infrastructure associated with getting electricity to homes, businesses and institutions. Dakota Electric Association owns and operates 4,095 miles of underground and overhead electric lines.
- **Schmitt & Sons** is a privately held (employee-owned) transportation provider. They operate school bus, public transportation, airport shuttle and charter bus service under contract for schools, transit agencies, airports and private parties.

The upfront costs of the electric school bus was shared by the three partners. Great River Energy and Dakota Electric Association used new technology funding to raise \$250,000

for the electric school bus. Schmitt & Sons paid the remaining cost of the bus (about \$125,000), which is about \$25,000 more expensive than an equivalent new diesel bus. Schmitt and Sons will own and operate the bus it in service. Per the agreement between the partners, the bus will be charged in the service territory for a contract period of 8 years. Great River Energy and Dakota Electric also retain the right to monitor and report data for the contract period.

Great River Energy and Dakota Electric are excited about electric school buses because they can be charged overnight, when wind energy is abundant. They are also interested in reducing vehicle emissions and improving air quality. The school bus contractor, Schmitt & Sons, was motivated to participate in the pilot because of a strong interest in clean fuel and low emissions technologies. Schmitt & Sons also hopes to save between \$10,000 and \$12,000 a year through lower fuel and maintenance costs. The estimated the pay-back on the \$25,000 incremental investment will be a little over two years.

Depending on grant funding, this will be the first of 3 electric school buses to be deployed in the area.