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Forget the Prius. The Future Of Electric Is the School Bus

By [MIKE RAMSEY](#)

As long as Americans love to drive far and fast, electric cars may never be the perfect answer to the country's green transportation needs. But the routine runs of electric school buses are another thing altogether.

Bus maker Trans Tech Bus this year said it would start making an electric school bus in a partnership with Smith Electric Vehicles. The eTrans bus is one of a new generation of zero-emission electric and hybrid-electric models that are slowly making their way to school districts around the country.

It's hard to imagine the bulky, boxy school bus at the forefront of clean-energy and fuel-saving technology. Most buses run on diesel fuel, get mileage in the single digits and have the aerodynamic profile of, well, a school bus.

But school buses are almost ideally suited to be electric vehicles. For one thing, they cover fairly short distances on their daily runs, rarely leaving city limits on the way to and from school. And they follow set, predictable routes. That reduces the chances of a bus accidentally running out of battery power before it finishes its route and returns to the lot.

What's more, school buses make frequent stops. While that's bad for fuel-efficiency on a conventional gasoline or diesel vehicle, electric vehicles can capture some of the energy used in applying the brakes to recharge their batteries, extending their range.

One big plus: School buses are off the streets sitting in a depot for much of the day, giving them plenty of time to recharge their batteries.

"They have fixed routes and downtime in the day," says Bryan Hansel, CEO of Smith Electric Vehicles, a Kansas City, Mo., manufacturer of the electric motors, batteries and underbody of the eTrans bus. "It really does allow you to maximize the use of that battery and make the money work."

But money remains an obstacle. While electric buses could save budget-conscious school districts on fuel costs over the long term, the upfront costs are high.

A hybrid, gas-electric bus costs about 60% more than a diesel model, says David Hillman, a marketing manager for [Navistar International](#), which makes school buses under the IC Bus brand.

Navistar was the first U.S. bus maker in the U.S. to introduce a hybrid model. It has sold about 200 hybrids and plug-in hybrid-electric buses since 2007. The hybrids improve fuel economy by 30%, and the plug-ins can improve it by up to 65%, he says. But because of the price, most districts can't afford to buy more than one or two.



Trans Tech

One school district estimates it could save 16 gallons of fuel a day with Trans Tech's electric school bus.

"The performance so far has been very good," Mr. Hillman says. "We've got some customers that are thrilled with them and wish they had more funding to put them in the fleet. The problem is school districts are hurting, so funding has become a real pinch point."

Trans Tech, a unit of Transportation Collaborative Inc., hasn't released the pricing of its new electric school buses, but Smith's other electric vehicles typically sell at a \$30,000 or larger premium over the diesel version. Dan Daniels, Trans Tech president, said he plans to price the eTrans so that districts could expect to recover the added cost through fuel savings over three to five years.

Some districts are ready to take the gamble. Trans Tech's first sale is to King's Canyon School Unified District, near Fresno, Calif. The 10,000-student district has long been a leader in purchasing low-emission buses, partly because the air quality in the area is poor, says John Clements, the district's director of transportation.

"We are looking at it as an opportunity to bring in new technology" that reduces air pollution, Mr. Clements says. "We have some of the worst air quality in the nation."

Mr. Clements said his district will be paying a total of \$35,000 for its bus after receiving grants that will cover much of the cost. "We hope to get a second electric and share an electric bus with neighboring school districts," he adds.

The average school bus gets about five to six miles a gallon and travels around 14,000 miles each year in Mr. Clements's district. An electric bus would save his district about 16 gallons of fuel a day, or between \$50 and \$60 of diesel, he says. Recharging the battery on the electric bus would cost about \$17.

Write to Mike Ramsey at michael.ramsey@wsj.com