

CTA poised for massive expansion of electric bus fleet

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The CTA could add as many as 27 electric buses to its fleet. | File photo

The CTA is primed for a major expansion of its electric bus experiment now that it can use an \$8.1 million federal grant to buy as many as 27 zero-emission “green machines,” the Chicago Sun-Times has learned.

The Chicago Transit Authority was the first major transit agency in the country to use electric buses as part of its regular service when it [added two environmentally friendly buses to its fleet in 2014](#).

The CTA has been cleared to switch an \$8.1 million federal grant for 26 hybrid, articulated buses to 27 standard-sized electric buses under a plan approved Jan. 7 by the Chicago Metropolitan Agency for Planning.

The electric-battery-powered buses will be even more environmentally friendly and use three times less fuel than the hybrid diesel-electric ones, CTA officials contended in a proposal seeking to amend their original request for federal funding.

The CTA will use any new electric buses to “further inform in-service tests of the electric bus technology” and to help the agency decide the right mix of buses when it makes its next major procurement, a purchase of more than 1,000 buses in 2020, the CTA wrote in comments to the Chicago Metropolitan Agency for Planning.

Those new buses would presumably be used to replace more than half the CTA’s existing fleet of 1,888 buses, offering the agency the chance to convert to a majority-electric fleet if funding allows.

A single standard-sized electric bus costs about \$800,000. The federal grant provides \$300,000 per bus, which covers the cost difference between an electric bus and a diesel one. The CTA still needs to nail down funding for the additional \$500,000 per bus.

The environmental impact of such a switch is substantial. Compared with a diesel bus, an electric bus would save the CTA roughly \$25,000 a year in fuel and remove from the air the equivalent of 23 cars worth of particulate matter, CTA officials estimate.

CTA spokesman Brian Steele cautioned that the CTA does not yet know how many additional electric buses it might buy, or exactly when, but it views the technology as so “promising” — even as compared with a hybrid bus — that it is worth an expanded test.

For the past 14 months, the CTA has been running its two “green machines” — green-painted electric buses — on a variety of routes and conditions, including 90-degree heat, snow, rain and ice.

They have been averaging 97 miles a day on one charge from a garage. If outfitted with a new “enroute” charging system, they could achieve as many as 700 miles a day, CTA officials told CMAP.

“Clearly our buses are workhorses. They drive hundreds of miles every day. It’s a lot of stop-and-start driving. We’ve tested two of them, and they perform very well,” Steele said.

“We want to increase the sample size so we have a broader test. Then, four or five years from now, we’ll have enough information to decide what our next large purchase will be.”

The standard-sized electric buses would replace standard-sized diesel buses and not prevent the CTA from buying additional articulated buses to prevent a decrease in capacity, Steele said.

The CTA operates 306 articulated, 60-foot buses. Most of them — 240 — are diesel-electric hybrids; 66 are diesel. Of the agency’s more common, 1,582 40-foot buses, the vast majority are diesel-powered. Two are electric and eight are hybrid.

The electric buses provide a cleaner, quieter ride and produce zero tailpipe emissions. They are powered by rechargeable batteries and propelled by an electric motor instead of an internal-combustion engine.