

First Arizona School District Buys Hybrid School Bus

Written by Art Gissendaner

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The Madison School District in Phoenix is the first school district in Arizona to purchase a hybrid school bus.

The C2e Hybrid built by Thomas Built Buses is one of the only self-sustaining hybrid school buses manufactured in the United States. It uses an electric motor/generator mounted between the transmission and the engine to generate electric power that is stored in the hybrid batteries when the brakes are applied.

“We believe this is a wonderful opportunity for the district,” said Del Anderson, bus sales manager for Auto Safety House, a Thomas Built distributor. “There have been electric buses and hybrids in the past but never with this technology. It is not only safe transportation but it is environmentally safe also.”

District officials said the acquisition of the 78-passenger, Type C bus keeps Madison on the cutting edge of student transportation innovation while lessening the district’s environmental footprint in an economical manner. Scott Wells, director of maintenance and transportation, said the C2e is the best of the alternative-fuel buses available.

“When we originally began looking into alternative-fuel buses, we looked at the electric, CNG and propane, but the self-sustaining bus doesn’t require an alternative fuel source and we don’t have to look for charging stations,” Wells said. “Something that renews its own energy is probably the highest priority we could have picked. We get longer life out of the braking systems, so again, that’s saving money.”

The key to the C2e’s efficiency comes from its ability to use hybrid battery power to assist acceleration while restoring power during braking. Officials said this makes the C2e ideal for stop-and-go driving. The smaller engine means reduced emissions when the diesel system is engaged during idling.

Madison School Board Member Scott Holcomb said the fact that a supporting infrastructure is not needed, makes the C2e financially feasible for school districts Madison’s size.

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“Madison is a relatively small school district, and natural gas, propane autogas and other systems require you to build an infrastructure to maintain those alternative buses,” Holcomb said. “We actually had that before, but infrastructure costs and the maintenance actually outweighed the benefits. Because this (bus) is self sustaining, any small school district can utilize it because they don’t need the charging or natural gas stations. That’s a huge plus especially during this time when funding for education is going down.”

Madison Superintendent Dr. Tim Ham said the district needed an economically and environmentally sound transportation solution that would allow more money to be put back into the classroom.

“That was the challenge,” he said. “Is there something out there that would accomplish both of those? And of course, this is the result of that.”

Ham said they will monitor the C2e’s performance before pursuing additional purchases.

The Valley of the Sun Clean Cities Coalition encourages the acquisition of environmentally friendly school buses for the health of students and neighborhoods. Coalition Executive Director Bill Sheaffer said his group worked with Auto Safety House and Madison to facilitate the sale.

“A lot of what we do is to bring together those who are looking for the technology and those who are using it,” Sheaffer said. “We will now utilize Madison by having them attend meetings with other school districts to talk about how this unit works.”

Several hundred C2e hybrids already are in use in California, Nevada, Kentucky and Maine.