

Sartell resident is plugged in - to an electric car he converted

By Jane Laskey • jlaskey@stcloudtimes.com • September 26, 2009



Sartell resident Brian Darovic talks about the 1994 Saturn SC2 coupe that he

is converting into an electric vehicle. (Kimm Anderson, kanderson@stcloudtimes.com)

SARTELL — For Brian Darovic, filling up his car is as simple as plugging in a toaster — and almost as inexpensive.

Darovic of Sartell recently converted his car from a standard, gas-powered vehicle to an electric, battery-powered vehicle. The project was spurred by high gas prices last summer, when it cost \$56 to fill up his Subaru.

Though gas prices have declined since then, Darovic anticipates they'll climb again. And when they do, he'll be ready with a car that costs just pennies per mile.

“The idea of an electric car may not seem so great in 2009 when fuel prices are low. But when gas gets to be \$4 a gallon again and more, everybody is going to sit down and start talking about it,” Darovic said. “I’d like to say I’m ahead of the curve because it’s going to pay off in a couple of years.”

Do it yourself

New electric cars and hybrids appear on the market every year, but their price tags can be a little intimidating.

On the high end there is the sporty Tesla Roadster that has lured the likes of George Clooney and Matt Damon to shell out \$100,000. On the low end there's Electric City Motors' Current at about \$22,500.

Even with the promise of fuel savings and federal tax incentives, which vary from \$2,500-\$7,500, the initial cost of electric vehicles is too high to lure many buyers.

"Sure, you could buy a GM Volt next year for \$40,000," Darovic said. "But are you going to be spending \$40,000 on a car next year? I'm not."

So Darovic decided to build one himself. With a background in mechanical and product engineering, the project of converting a car from an internal combustion engine to an electric engine appealed to him.

"I've been a car nut since high school," Darovic said.

From scratch

Though electric car conversion kits are available for between \$10,000 and \$15,000, Darovic was determined to build it from scratch.

He found a 1994 Saturn and spent more than a year on the project. He sketched designs and then removed the vehicle's engine, fuel tank, exhaust system and radiator. They were replaced with an electric motor, 12 batteries and a device that controls the motor speed.

The project cost between \$9,000 and \$10,000, not including labor.

"I've been doing it super duper cheap," Darovic said.

Darovic has christened his converted car creation the Voltessa. It currently covers about 25 miles per charge with a top speed of 60 mph. But Darovic expects to reach 40 miles per charge after he finishes fine-tuning the vehicle.

Darovic said the Voltessa would be the perfect match for someone like his wife, Rita, who commutes from Sartell to St. Cloud for work each day.

Benefits

Darovic estimates his Voltessa will cost about \$1 per charge or a little more than 2 cents per mile. Electric City Motors Current is reported to cost only 1 cent per mile.

Electric cars are also low maintenance. Tires, brakes, shock absorbers, lights, horn, radio, seats, glass and body work remain the same as those of a gasoline-fueled engine.

But there is no more need for oil changes, antifreeze, belts, exhaust systems or tune-ups. Electric motors are essentially zero maintenance and last the life of the vehicle.

Domestic energy

Darovic also likes the fact that his new car is not dependent on oil imports from foreign countries.

“This car, all electric cars, uses domestic energy. All the jobs they generate are in the U.S.,” Darovic said. “When we use oil from overseas, the money we spend on oil is going overseas to people who really don’t even like us very much.”

And then there are the environmental benefits. Electric cars do not generate harmful emissions.

While Darovic had experience working with cars, he said the conversion process is simple enough for those with less experience.

“Just about anybody could do it. It’s not rocket science,” Darovic said.

To keep up with innovations, Darovic attends Minnesota Electric Auto Association meetings. The group also allows him to connect with other electric car enthusiasts.

As demand increases and costs decrease, electric cars are likely to become more affordable. For those that don’t want to wait, converting an existing vehicle to electric power offers a cost-effective solution for today.

“It’s a practical thing. I would drive this thing every day,” Darovic said.