

## The Tesla Way

*Dr. Gloria C. Duffy, President and CEO*

**M**Y HUSBAND ROD and I are electric car aficionados, for all the obvious environmental reasons. Rod had his first custom electric car built in the early 1990s. It was a Porsche 914 with the gas engine and components removed and replaced with golf cart batteries. A gas car conversion like the “voltsporsche,” as was emblazoned on its side, was the only electric auto option for its time, had a range of 45 miles, was rather heavy, and smelled like battery acid.

The next step up for us was two leased GM EV-1 electric vehicles, very capable cars with a 120-mile range that we tried unsuccessfully to purchase when GM decided to terminate the leases and then crush and dispose of the nearly new cars in 2003. Then we had a Prius and most recently a Nissan Leaf.

Now we are the proud lessors of a bright red Tesla Model S, and with this the modern era of the electric car has finally arrived. Not interested in plunking down the purchase price of \$79,000, by splitting the monthly lease cost—considering the rebate and savings on gas (we charge the car from our solar-powered home)—the Model S is affordable for Rod and me. And it is a great car, with a range of 230 miles (models with more batteries than ours go up to about 310 miles range), incredible electronics, fast acceleration, great safety features and beautiful styling. It is more than competitive with gas-powered luxury cars.

One small example of Tesla engineering is the front and back side windows. They move to seal themselves after one closes the doors, to ensure a smooth, aerodynamic surface and minimal drag from wind, to optimize the car’s energy efficiency.

The impressive thing about the Tesla is that it isn’t only a car, but a way of thinking. At GM, the EV-1 was a step-child for the giant car company. Only about 600 were produced, they were available only by word of mouth and after a long wait, and were quickly discontinued by GM once California’s air quality standards were changed to no longer require automakers to offer a fully electric vehicle in our state.

From start to finish, the Tesla proposition is completely different. It is obviously a local product, designed and built in the beautifully reconditioned NUMMI plant in Fremont. Electric cars and batteries are the only products Tesla makes, so their focus is singular. The company has adopted a unique supply chain approach, including source agreements with companies such as Daimler and Toyota, but designing and producing many of the Tesla systems itself. From the batteries to the big-screen infotainment system in the cars, Tesla is the designer and manufacturer, leading to unique, functional and

beautiful design. This year, the “Gigafactory,” a Tesla lithium-ion battery production plant in Nevada, will start to produce Tesla batteries at scale, lowering their cost.

Starting with founder Elon Musk, every employee at Tesla is both an advocate and an educator about the Tesla and the electric vehicle concept. They actively talk about their mission. To quote from the Tesla website, “Tesla’s mission is to accelerate the world’s transition to sustainable transportation. To achieve that goal, we must produce electric vehicles in sufficient volume to force change in the automobile industry.”

Acquiring a Tesla is an educational experience. A tour of the Fremont plant is part of the car delivery, where young Tesla experts show new Tesla owners and lessors each step of the design and production process. They explain the company’s supply chain concept and point out the giant piece of equipment that Tesla employees disassembled, packed in trucks and drove from the Midwest to Fremont in order to stay on schedule for the start of production a few years ago. Tesla employees are advocates for environmental stewardship.

At the end of the factory tour, the Teslas to be delivered that day are displayed under a canopy, and a technician sits in each car with the new drivers, explaining the Tesla systems and answering questions. Then one drives off in the incredibly powerful and quiet car. With the Tesla, the electric car has become very cool.

A new Model X Tesla SUV is now rolling off the Fremont production line. Like the Model S, it will be a high-priced car. The exciting prospect is for the next Tesla version, Model 3, designed to be lower-cost and scheduled for release in 2017. This could bring the Tesla experience within range of many more consumers. With the kind of engineering, design and support the other Tesla models offer, a less-expensive Tesla should be very competitive with gas-powered counterparts.

Even if you’re not in the market for a Tesla right now, you can take the Tesla factory tour. It is inspiring to learn about this home-grown California auto manufacturer and see what they are accomplishing for both consumers and the environment.



Photo courtesy of Gloria Duffy

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