

# Transportation Continues to Evolve

*Electric vehicles offer an affordable and convenient opportunity for “ruralites”*



**Gary Graunke** is president of the Oregon Electric Vehicle Association in Tigard, Oregon.

In 1971, I was a young programmer and Navy Reservist.

I wrote a report for President Richard Nixon tracking violations of his wage-price freeze. Rising oil prices began a decade of rapid inflation and economic disruption. I didn't know until later that U.S. production of cheap, conventional oil reached its all-time peak in 1970. After experiencing gas rationing, I looked for an electric car.

Why electric? Virtually all of America's electricity is produced here in the U.S. The electricity most of you use is generated from a variety of clean, sustainable and stable resources.

An electric motor is three to four times more efficient than the ideal heat engine. For these reasons, Securing America's Future Energy—a group that follows national energy security and economics—and many others recommend electric-powered transportation. In the '70s, I could find only a slow, unsafe “golf cart” and another vehicle costing more than my house!

Today we have much better choices for electric vehicles, thanks to compounding 10 percent annual improvements in battery technology. There are now more than 28 models of plug-in cars from almost every automaker driven today in America.

All-electric cars now can go 90 to 300 miles on a single charge for a fill-up cost of \$2 to \$7; require little maintenance and no oil changes; and typically charge overnight at home. At home charging can work especially well for rural residents who may live many miles from a gas station. Nearly all EVs come with a portable, lightweight 110-volt charging adapter that plugs in at home or wherever electricity is available. Faster 240V versions also are available.

Most EVs also can use fast chargers for longer trips. EV drivers seldom fully charge on the road,

since charging a battery is like pouring water into a glass—you slow down as it fills. As an EV owner, we usually charge only enough to get to the next station with a comfortable margin. We plan meals and breaks at charging stops to avoid waiting the 20 to 45 minutes it takes to fast charge. To find public charging stations, go to [plugshare.com](http://plugshare.com).

Affordable? I know one Ruralite reader who just leased a new Nissan Leaf for \$0 down, and \$259 a month for three years with 15,000 miles/year allowance. Off lease, they sell for as low as \$8,000.

The 238-mile range Chevy Bolt costs \$38,000, not much more than the \$35,000 average car price today. For rural drivers, the fuel and maintenance savings quickly make up for higher up-front cost. Electricity prices increase slowly—usually only once a year—so there are no wild price swings. Many electric cars are made in the U.S., supporting American jobs.

Durable? Simple EV drive trains will outlast the car body. There is no transmission. The battery does not die suddenly, but gradually loses capacity as it ages. By the time it needs to be replaced, new batteries cost less and/or have much more driving range. My 2000 all-electric Honda Insight conversion has undergone two upgrades. It still runs as well as ever, but goes much farther.

EVs are fun to drive. They have very smooth acceleration and, together with their low center of gravity and motor braking, they drive much like a sports car. They don't lose traction changing gears on icy roads. And yes, they are quiet.

But it's really hard to describe. You will just have to experience the “EV grin” yourself.

Call a few car dealers, see which ones have EVs in stock and take one for a test drive. I think you'll be impressed.

For more information, go to [pluginamerica.org](http://pluginamerica.org). ■