Electric cars no longer a shocking prospect

YOUR ENVIRONMENT

By Lisa Lillelund

Beverly Citizen Newspaper, Thursday, December 11, 2008, Beverly, MA

www.wickedlocal.com/beverly/news

Electric Vehicles — a thing of the past, hyped up fad that will fade, or a real, viable means of transportation for the general population?

Until two months ago, I hadn't really given much consideration to the concept that pure electric vehicles could soon become a part of the normal landscape along the highways. Sure, I embraced the fact that hybrid vehicles, which run on both gas and electricity, are gaining in popularity. But electric vehicles, known as EVs, which run only on electricity, seemed a distant vision to me.

Recent presentations I attended at the Clean Energy Conference in Boston (www.greenovationconference.com) and at the Museum of Science Center in Cambridge have me now very optimist about the future of electric vehicles as a viable means of transportation for us all. How soon you may wonder? Looks like it will become a reality in 2012 on the islands of Hawaii and around the San Francisco Bay Area.

Thanks to a national commitment of leaders in three countries to build an infrastructure for electric vehicles, this market will open up in Denmark in 2011, in Israel in 2011 and in Australia in 2012.

This EV infrastructure with a network of "smart" charging spots is being created by a bold, innovative company called Better Place, www.betterplace.com. Fortunately for us, many business leaders such as former SAP software guru Shai Agassi are going into clean technology and creating dynamic companies such as Better Place. They are teaming up with carmaker Renault-Nissan and battery maker A123Systems of Massachusetts to turn ideas into a reality.

Is popularity and dominance of electric cars in the United States just a vision of the future?

You may be surprised to learn that in 1899 and 1900 electric cars outsold gasoline and steam-powered cars. According to The History of Electric Vehicles found online at www.about.com, “Electric vehicles had many advantages over their competitors in the early 1900s. They did not have the vibration, smell and noise associated with gasoline cars. Changing gears on gasoline cars was the most difficult part of driving, while electric vehicles did not require gear changes.”

From 1900 through the 1920s, the electric car remained popular, however some discoveries and new inventions eventually led to an increased popularity in gasoline-powered cars. The discovery of crude oil in Texas helped reduce the price of gasoline. The assembly line and mass production of the internal combustion engine implemented by Henry Ford made gasoline powered cars less expensive than electric cars. The invention of the electric starter took away the unpleasant task of needing to crank up a gasoline-powered car. All of these factors led to the decline of the electric car.

Today many electric vehicles are still successfully used in transportation with electric trains, buses, trams, forklifts, motorcycles and scooters.

What are the advantages of electric vehicles?

In my opinion, there are two very important reasons we should support and encourage the adoption of electric vehicles throughout the world.

One: Electric vehicles dramatically reduce the amount of pollution and greenhouse-gas emissions into the air. Obviously the best type of electric power supplied to the cars is electricity with zero emissions coming from renewables such as wind, solar, and hydro rather than coal-powered plants. Israel will build solar farms to supply the energy to the electric cars, while Denmark will use wind power as a source. The good news, however, is that even if we use power plants fired by coal, this will still reduce greenhouse-gas emissions by an average of around 50 percent compared to gasoline powered cars.

Two: The move to electric cars will reduce our dependence on fossil fuels and our need to import oil from other nations. We are a very energy intensive nation with most households having a couple cars, a washer, dryer, air conditioning, heat, and lots of electronics at home such as TVs and computers. Do we want to be held hostage to the oil from foreign countries as a necessity to keep our economy going? Do we want to be dependent on countries that may threaten our national security?

So how much does transportation actually contribute to pollution, climate change, and our importation of foreign oil?

According the U.S. Department of Energy, in 2007 transportation accounted for about 29 percent of our energy consumption. Considering that the United States imported about 9.6 million barrels of oil per day as of July 4, 2008 (http://tonto.eia.doe.gov), it

would be pretty great to think that we could import about 2.8 million fewer barrels a day or over a billion barrels a year of imported oil if we switched from gasoline to electric cars.

You may be pleased to know that many New England companies are involved in the electric vehicle market and are well positioned for its expansion. At the Clean Energy Conference in Boston on November 18-19, Peter Hughes from Vectrix in New Bedford, shared photos and information on their hot, new electric scooters and motorcycles, www.vectrix.com. They are now available at Riverside Motorsports in Somerville.

For the commercial vehicle market, Dean McGrew of Azure Dynamics in Woburn showed their proprietary electric and hybrid electric drive technology, which is being used in many, Ford commercial vehicles today.

Good luck to the many New England companies bringing new technology and innovation to help grow the electric vehicle marketplace.

Lisa Lillelund is a regular columnist on the environment with the Beverly Citizen and a consultant on Clean Energy. Lisa welcomes your comments at lisa@mangonetworks.com.