WORLD BUSINESS ACADEMY
Sharing the Vision... Building the Network... Healing the Planet

P E R S P E C T I V E S

by ***Rinaldo S. Brutoco***

Rinaldo S. Brutoco is the Founding President and CEO of the Santa Barbara-based World Business Academy and co-founder of JUST Capital. He's a serial entrepreneur, executive, author, radio host, and futurist who's published on the role of business in relation to pressing moral, environmental, and social concerns for over 35 years.

Charging Ahead?

Crashing the grid!

Electric cars are gushing onto our streets from Tesla, and from Nissan, GM, Ford, Volkswagen, and a half dozen other car manufacturers (450 different models globally!). Elon Musk succeeded beyond Detroit's wildest dreams in convincing first the American public, and then the global marketplace, that driving an electric car was "cool". Everyone wanted one, and that was before the price of gas passed $7/gallon in California. Tesla demonstrated that the demand would be there if the car companies would innovate efficiently (which Musk did, and they didn't) and offer adequate distance in between each charge.

It is remarkable how quickly California and the Federal government have gotten on board the electric car juggernaut. California is building thousands of charging stations all over the State, and soon the Federal government will be underwriting the construction of a coast-to-coast charging network thanks to the Biden Administration. Amazing.

In 2021, 6.6 million electric vehicles (EVs) were sold globally (half in China), which was about ten percent of the total car market. That brings the total global EV fleet to 16 million cars on the road. I suspect that both State officials and the Biden Administration believe that all those charging stations will service millions of cars in California and many millions more in the rest of the country.

The premium rapid chargers Musk's Tesla has at many stations can fully recharge a Tesla in as little as 45 minutes. There are going to be a lot of coffee shops waiting for vehicles to get a charge, where they'll serve you a hot meal, or at least your favorite dessert ala mode while you wait. The Federal government will more likely build out the less expensive charging stations like Musk's earlier stations, which take about four hours to fully recharge the vehicle. Who has four hours to wait until the car is recharged? Unless they intend to do it while they work or shop during the middle of the day.

Ah, but therein lies the rub! If all those cars are charging during the day when the air conditioning units are blasting away in California and many other states, how will the grid hold up?

The truth is, California is suffering from one or more rolling blackouts each month already this year. If another million cars are plugged in during the heat of the day, when folks are shopping or at work, these outages will become even more severe. The International Energy Agency (IEA) forecasts electrical demand for EVs, which is projected to grow "twenty-fold" and will lead to "grid congestion." It is way past time we figured out how to put all that energy onto a grid that is already collapsing in California, and the even more fragile grid elsewhere in the USA.

My daughter owns a Nissan Leaf, and many like her recharge their electric vehicles every day from solar panels on their roof. Just last night a very close friend of mine was "bragging" about how she enjoyed driving by gas stations in her GM Volt which she recharges every day by plugging into her solar panels avoiding those sky-high prices at the pump.

So, what could possibly be wrong with this picture of reducing our greenhouse gases by "going electric" with our vehicles?

If you travel under 100 miles per day and can keep your car recharged from your own solar cells like my daughter and my good friend, the world is your oyster. You literally are paying nothing for fuel and your way of obtaining electricity doesn't require you to pay the electric company, nor to rely on electricity that was produced by a "Peaker-plant" burning fossil fuel to run the grid. One could even make the case that it's economically smart and environmentally sound for a company, say Amazon, to capture solar energy in batteries during the day to recharge their growing Rivian electric van fleet. The benefits end there, however.

Why? The IEA observes, "EVs are likely to account for less than 20 percent of the overall vehicle stock in most countries. However, some early adopter cities could face grid congestion pressures between now and 2030." In fact, they are wrong. Early adapter cities and states are already facing "grid congestion." Texas is a case in point.

Rolling blackouts, and even grid collapse, have already occurred in Texas. And, just as the World Business Academy has been predicting for several years, the grid became so compromised by electric demand, including electric car charging during peak hours, that Tesla sent an emergency notice to all its car owners one day last month. The Tesla notice bore the headline "Help Relieve Heat Wave Stress on the Grid" and went on to display this message on every Tesla dashboard: "The grid operator recommends avoiding charging during peak hours between 3pm and 8pm, if possible, to help statewide efforts to manage demand."

The grid crisis brought on by EVs is already here, and we haven't even begun to add the millions and millions of cars that will be sold each year from now on. Oh, and here's another zinger, the EVs themselves get about 17 percent drop in range when the temperature hits 95 degrees and the car's air conditioning is on. That's a double whammy for EVs and for a society that will find itself in a constant struggle between air conditioning and recharging automobiles. The crisis is here, and every EV added to the grid, whether in California or elsewhere in the US, will only further aggravate the problem until the grid is so constantly "out" that it is, in effect, no longer able to adequately function.

What's the solution? Simple. Go get yourself a hydrogen car and laugh as you pass those fossil fuel gas stations. The Toyota Mirai is a great one, and the Hyundai Nexo is even better. They refill in 4-5 minutes at any one of 49 fueling stations all around the state (forecasted to be 100 by year-end), run for 350 miles on a full tank, and haven't experienced a single "incident" in over 70,000 refuelings to date. Best of all, Toyota, Honda, and Hyundai are underwriting the hydrogen fuel for now, so when you lease or buy a hydrogen vehicle, the fuel is FREE for the life of the lease or purchase contract! You won't need to eat that pie ala mode or lose four hours because you'll refuel in minutes! Best of all, you won't ever have to choose between air conditioning in increasingly hot weather or driving your car and crashing the grid.

Published in the 06/16/2022 edition of the Montecito Journal