Why Do I Have an Insatiable Need for an Aptera?
by Jerry Kingzett

I've preordered an Aptera EV and invested a small amount in Aptera Motors, but it is hard to justify why. I started with a Chevrolet Volt, upgraded to a Chevrolet Bolt, and the next logical choice should be a Tesla Model Y Long Range, but I decided to get the Aptera instead.

Long before there was a Nissan Leaf, I learned about Global Warming and the proof that it is man-made. I knew it was a big problem. So, when I did a Ride and Drive in a Nissan Leaf, I thought buying an EV was doing my part to save the planet. But the planet is not at risk, humanity is being harmed. People are suffering and dying, but the most I seem to be able to do is buy an EV. True, I'm in the process of switching from natural gas to heat pumps and paying a little more for 100% renewable electricity, but it feels like throwing stones at the people with tanks and guns.

I have started to appreciate how difficult it is for people to adopt EVs. I never assumed that people could swap an EV for a gasoline car unless they really want to curb global warming. The up-front cost is higher and the charging is at best annoying to completely frustrating. My Bolt has a very slow, fast charging speed of 56 kW and I had one trip where I spent much more time charging than driving.

I admire what people are doing by just changing their lifestyles. They fly less, use public transportation, change their diets, buy less, and they vote.

Still, when I see the slow adoption of EVs in this country I become frustrated. Is it a lack of public awareness or the lack of proper government support? I don't know what people's awareness is, but I do know that countries that have more government support have greater adoption of EVs. I need to be less judgemental about people who don't buy EVs.

So why am I buying an Aptera Solar Electric Vehicle, when I know it may not convince anyone to buy an EV? Even though I feel like a failure at trying to convince anyone to switch to electric, I still want to be seen as one of 'Those' people. What could be better than an Aptera to scream "TALK to ME" especially after I cover the doors with "Save the Climate" stickers.

The Aptera is special in more ways than how it looks. Its shape includes keeping it to three wheels to reduce aerodynamic drag which is a force on the vehicle that resists its motion through air. The faster the vehicle moves through the air the greater force of drag. So keeping aerodynamic drag as low as possible improves the efficiency of the vehicle. Keeping the vehicle light also improves efficiency which means more miles with a smaller battery which also gives more miles from the solar panels. One of the ways of making the vehicle light is by using direct-drive in-wheel motors and still allowing for all-wheel drive. The forged carbon fiber body parts are also key in making the body light and making it easier to assemble.

Personally, I love Aptera's Right to Repair program. The fact that they don't paint their vehicles and use vinyl wraps instead is a big win for the environment. I know that being an early adopter is going to come with problems but I want to share in that adventure. Whether or not Aptera Motors succeeds and grows, I'm glad that I am purchasing one of the first run vehicles.

So let's look at the mathematics to see how different vehicles compete on cost based on my usage:
My home electricity cost 17¢/kWh

Chevrolet Bolt averages 3.6 miles/kWh
So, my car fuel cost is 4.7¢/mile (the price when I charge at home)
My previous car, Chevrolet Volt, would get 40 miles to the gallon on gasoline.
Premium gasoline today would cost $3.78/gallon
So, my old Volt would cost 9.5¢/mile which is twice as much as with electricity.
Gasoline versus home charging is not a fair comparison, because I only used gasoline for road trips, so I need to compare it to rapid charging.
I use Electrify America which costs 43¢/kWh and would cost me 12¢/mile.
Since I kept records of my Volt, one-third of my miles driven were gasoline.
A 2015 Chevrolet Volt starts at around $35,000 but I purchased a used 2011 Chevrolet Volt in 2015 I will use the 2015 sticker price.
My adjusted fuel cost (city/highway) for my Chevrolet Volt is 6.3¢/mile.

My Fuel Cost and Vehicle Cost assuming I purchased at Sticker Price		
Vehicle	My Adjusted Fuel Cost	Sticker Price
Chevrolet Volt	6.3¢/mile - 33% CO2	$35,000 (2015)
Chevrolet Bolt	7.1¢/mile - 0% CO2	$37,495 (2017)
Toyota Prius	6.7¢/mile - 100% CO2	$25,500 (2015)
Chevrolet Cruze	32.7¢/mile - 100% CO2	$18,600 (2015)
Aptera	0.8¢/mile - 0% CO2	$34,500 (2023)
Tesla Model Y Long Range	9.4¢/mile - 0% CO2	$61,630 (2023)

Since I don't keep similar records for my Chevrolet Bolt, I will assume that one-third of my miles driven were with rapid charging.
A 2017 Chevrolet Bolt starts at around $37,495, but I paid much less than that for my 2020 Bolt.
My adjusted fuel cost (city/highway) for my Chevrolet Bolt is 7.1¢/mile.

So, let's assume that I purchased a 2015 Toyota Prius/MPG 51 city / 48 highway
A new 2015 Toyota Prius starts around $25,500
Regular gasoline today would cost $3.35/gallon
A 2015 Toyota Prius adjusted fuel cost (city/highway) for me would be 6.7¢/mile.

Let's compare these to the 2015 Chevrolet Cruze/MPG Up to 28 city / 42 highway
A new 2015 Chevrolet Cruze starts at around $18,600
So, a 2015 Chevrolet Cruze adjusted fuel cost for me would be 32.7¢/mile.

Of course, the total cost of ownership for all these cars will vary greatly, so in conclusion between 2015 and 2023 owning an EV is not based on cost alone and the only reason to buy a hybrid or an electric vehicle is to reduce CO2. It is predicted that during 2025 Battery Electric Vehicles (BEV) will start to have cost parity with Internal Combustion Engines (ICE), but I predict it will take much longer for BEVs, because of charging, to reach convenience parity.

Now let's look at the Aptera fuel cost being one-third from rapid charging. I will never need to charge at home because of the solar cells on the car, so the only time I will need rapid charging is when I travel outside of Ohio. Aptera is predicted to get 10 miles per kWh. The Aptera has a Tesla NACS plug on it to make it compatible with Tesla SuperChargers and the cost is typically about $0.25 per kWh. So, an Aptera adjusted fuel cost for me would be 0.8¢/mile.

If I were to purchase the Tesla it would replace my Chevrolet Bolt and its sale could reduce the cost of the Tesla by one-half so do your research for your needs.