# Green Supercars

The Mid-East has a long-running love affair with supercars. In the last year Ferrari sales have jumped 125 percent in the UAE with BMW and Audi not far behind. SSC is opening a new showroom in Dubai as is Aston Martin in Bahrain, where Germany's RUF is opening a $20 million factory. For over thirty years, Mid-East buyers have influenced the design decisions of Italian designers such as Masserati and Mid-East investors directly impact the industry by buying into Aston Martin and Daimler-Chrysler. Indeed, some supercar enthusiasts dote on their machines so much that the owner of a Lamborghini Murciélago LP640 had it shipped from Qatar back to the dealer in London for an oil change at a total coast of £23,552.

But would such enthusiasts, who sit up for a Bugatti Targa or a Veyron Coupe booming through the streets of Abu Dhabi, get equally excited for something a bit more green?

At first glance, you wouldn't think so. Up until recently, enviro-friendly cars have had the appeal of a plate of over-boiled cabbage. Mention a high-mileage, low-emissions car and it conjures a picture of something descended from a milk float. This isn't surprising, since up through the 1990s alternatively-powered cars were generally designed by cynical car manufacturers trying to get around California's draconian emission control laws or by people who hated motor cars in the first place and felt that if you had to drive one, then you'd better not enjoy it.

Electric cars were the worst example of this sort of thing. They were once so advanced that they held the land speed record. Unfortunately, that was in 1899 and for over a century electrics were overshadowed by their much more powerful, longer-range cousins that used petrol engines. Though electrics had something of a revival since the 1970s, they tended to be either production cars with half a ton of lead acid batteries jammed in or jumped-up golf carts with boxes stuck on them that were be associated in the public mind with the horrendous G-Wiz, which is justly notorious for being not only ugly, uncomfortable, incredibly dangerous in a crash and able to reach its top speed of 40 mph in... eventually, but once famously lost a drag race with a table.

Other alternatives, such as hybrids have fared much better in recent years, with many models winning awards for mileage, reliability and low emissions, but even they have a reputation for being about as exciting as driving a shoe.

However, all that is being changed by a new generation of designers who realise that owning a green car is more of a statement than a commitment and that the best way to build an environmentally-friendly car that people actually wanted is to follow the example of racing car designers who have pushed car technology since Henry Ford's day: Build a high-performance car and work your way down rather than a relatively primitive machine and work your way up.

It also means that “green supercar” is no longer an oxymoron. In fact, there are high-performers available using just about every alternative power source with the possible exception of a wound up rubber band. Though I wouldn't take a bet against that one, given some of the ideas.

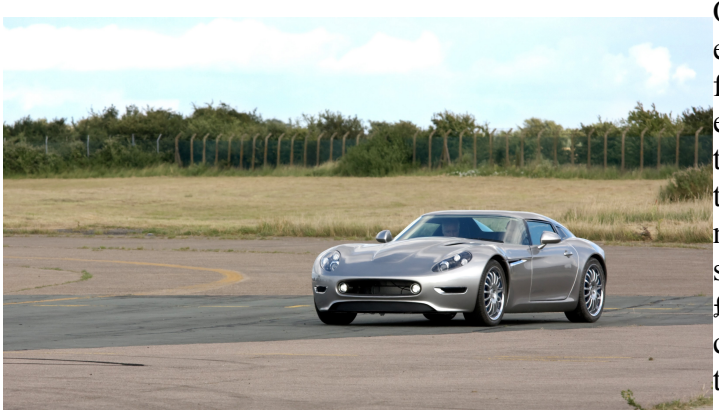
Perhaps the most prominent, certainly the most publicised, of the green supercars is the Tesla Roadster. Designed by Silicon Valley and built under contract by Lotus, the Tesla Roadster is an electric supercar that makes the G-Wiz look like, well, a G-Wiz.

Retailing at $100,000, the first thing you notice about the Roadster is that it looks a little like a Lotus Elise that's lost its tailpipe and is a bit easier to get in and out of with your dignity intact. The second thing you notice is that the gearbox is ridiculously simple even compared to an automatic: It has reverse, park and drive and that's it. It's like something out of a bumper car.

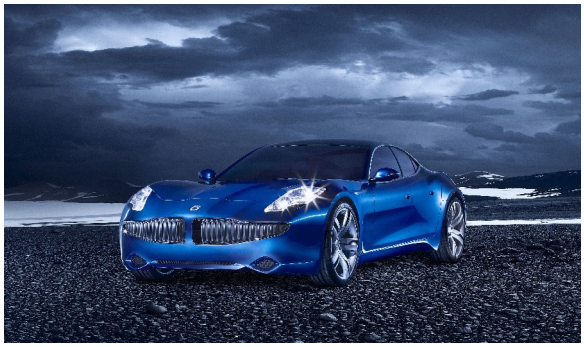
That's because the power doesn't come from a 400 lb muscle-car engine, but from a 115 lb, 14,000 rpm, AC electric motor fed by banks of lithium-ion batteries–the same batteries that were in the news recently for their tendency to explode when they overheat, which is why the Roadster's are liquid cooled. The car even has a touch screen display that, among other things, allows you to monitor battery status, though it's reported to run on Windows and therefore is about as reliable.

Lighter than conventional batteries, the Roadster's are powerful enough to put out 248 bhp to drive the machine at 125 mph, though you wouldn't know it sitting at the kerb. Switch it on and the dash lights up, but there's no comforting throb of pistons. Then you put it in gear, touch the accelerator and discover what "maximum torque at minimum load" means as the Roadster goes from 0 to 60 in 3.7 seconds.

And all of this in dead silence save for a faint electric whine.

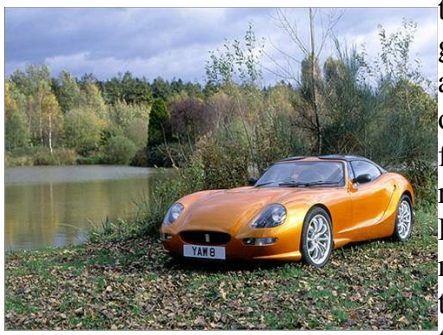


On the other hand, Tesla's competitor in the electric supercar field, the Lightning GT, is for those who want the sound of a "real" engine to go with their green credentials thanks to its "virtual engine sound" system, though this is a bit like making motorcycle noises while riding a bicycle. It may look similar to the Roadster in some ways, the £150,000 Lightning GT is a very different car. Instead of lithium-ion it uses a bank of twenty lithium-titanium batteries built by Altarino that put out 700 bhp and charge in only ten minutes–assuming that you have a three-phase mains outlet, otherwise it takes eight hours to power up. But you might be a bit confused looking for the engine because it hasn't got one. Instead it has four; one mounted in each wheel, where it's easy to mistake them for electric-blue disc brakes. This may look odd, but it helps the GT avoid the transmission problems that have plagued the Roadster, gives the GT independent control over each wheel and belts it along at a respectable 130 mph with 0 to 60 in under four seconds.



Unfortunately, even with these advances the electric supercars do lack one thing: Range. The makers claim that they can do 250 miles on a charge, though many commentators are a bit sceptical and put this figure much lower. Worse, unlike a petrol-driven car, you can't just pull in to a convenient station and fill up. That is where another breed of green supercar has the, at least present, advantage.

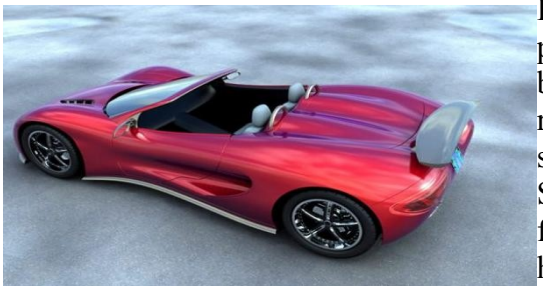
When we hear the word "hybrid" we think of something like a Prius; all virtue and no fun. But the Fisker Karma, built in Finland by Valmet, is trying to change all that. A $60,000 plug-in hybrid, the Karma goes as fast as the Roadster and GT, but doesn't do so well on the acceleration with 0 to 60 in a disappointing 5.8 seconds. On the other hand, the makers claim that with its ability to charge itself from the mains in the evening, solar panels on the roof, regenerative braking, and dual-mode "Q" drive that allows the Karma to switch between Sport and the economical "Stealth" mode, it can go for fifty miles on batteries alone. This means that the average driver can, in theory, run the Karma for a year on one tank of fuel. Though this is the sort of claim for which grains of salt are generally taken.



Then there are the supercars that burn less conventional fuels, such as Britain's biodiesel supercar, the Trident Iceni R, which has the advantage of using already existing technology and runs on vegetable oil. Not only does it have a 6.6 litre, 450 bhp, V8 turbodiesel engine that blasts it along at 170 mph, but it does 0 to 60 in 3.9 seconds, gets 68.9 mpg, but it has it over other cars both conventional and alternative in that you can fuel up at any restaurant with a fryer and it's the only supercar that smells like chip oil.

On the other end of the spectrum is the Ronn Motors Scorpion, which is a hydrogen hybrid.

There are actually two types of hydrogen hybrids. One is the hydrogen fuel cell version that uses the hydrogen to produce electricity that runs an electic motor with no emissions outside of water vapour. Think of it as an electric car with fuel cells taking the place of the batteries with a big tank of hydrogen thrown in. The other type, used by the Scorpion, is a more conventional petrol engine that's been designed to use hydrogen as well.



It works like this: The Scorpion's 3.5 litre V6 engine can put out 289 bhp and it can push the car to over 200 mph, but running on petrol, it can only do 27 mpg. That's pretty respectable mileage for a supercar, but not a green supercar. That's where the hydrogen comes in. The Scorpion has two fuel tanks; one for petrol and the other for water. As the Scorpion runs, its engine generates hydrogen from the water by electrolysis and stores it in a holding tank. Then, the hydrogen is squirted into the fuel air mixture, where it acts a bit like nitro in a drag racer to boost performance and lower the amount of petrol needed. The water is recycled for reuse and the Scorpion tools along with less pollutants while making 40 mpg.

But none of these are the ultimate in green supercars. They may make better gas mileage and put out less $Co_a$, but all the green seems to be wrapped up in the engine. What about the rest of the car?

For the bleeding edge of green supercarness you have to go back to Lotus and their Elise Eco. Though it does have a solar panel on the roof, this concept supercar has a conventional engine and has the same transmission as an Elise S, there is nothing conventional about the rest of it. The Eco is 32 kg lighter then the Elise S, providing better fuel economy and performance. And to make sure that this efficiency if maximised there's a “green” shift light to tell you when the optimum moment is reached to change gears. The car itself is made out of as many eco-friendly materials as possible with “ethically produced” “Eco Wool” made without dyes for the seat covers, sisal for the carpets, hemp/resin body panels and even water-based paints. Furthermore, Lotus has gone to extreme lengths to make the manufacturing as green as possible by reducing “carbon miles” in the process; using biodegradable, locally-produced materials wherever possible; and even a light-weight audio system so you can drive with a “green” stereo.

But the big question is, are green supercars cool?

All this enviro-friendliness is no doubt very good for the planet, but how do these green machines measure up as supercars? To be honest, they still have a way to go. On the whole, they road-test somewhere in the fair to middling range and those that, like the Elise Eco, have tried to reduce weight have shown improvements in performance and the electrics have won praise for their handling despite having a “fuel tank” that weighs in at half a ton, but with speeds averaging below 140 mph and few even approaching the 200 mark, Koneigsegg and Lamborghini aren't looking over their shoulders and while many green supercars are reported to be a fun drive, they are lacking that intangible Ferrari “Oh, my God! It's trying to kill me!” thrill.

But they probably said that when comparing petrol cars to electrics back in the early days of 1899, so who knows; maybe in ten years the sound coming from the Bahrain International Circuit won't be the roar of pistons, but the faint hum of something green.