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# GAS? ELECTRICITY? IN A CAR?!

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by Grant



They use two types of engines. They also save 90% more pollution. It's a real car, but it sure doesn't act like one.

Hybrid **ev** cars. They use electricity and gas as fuel with outstanding gas mileage, about 700-800 miles per tank. Car companies have started taking a huge interest in hybrid ev cars and so have recent car buyers. If you are interested to learn about electricity, a hybrid system, the drivetrain of a hybrid ev car, and car companies that are producing them, read on!



## Electricity

To put electricity into the car, which charges the battery, there is a plug connected to a cord, which is connected to a power bank. There is an electric car charging port. The charging port allows the car to be fed up with electricity. When you plug the car in it is almost like taking a plug and putting it into an outlet. You also put gas into the car like a regular car.



## Hybrid System

When the car runs, it runs on pure electricity, but when the car runs out of electricity, it runs on gas like regular car. There is a twist, when the car runs on gas it uses a hybrid system.

A hybrid system is when you step on the brakes it charges the battery. Say if you are driving and all of a sudden there is dead stopped traffic. The car will just run on the battery until you start driving again.

## Drive Train

A hybrid electric car has to be **FWD** (front wheel drive). A hybrid electric car has to be FWD because there needs to be space for the gas engine and electric system to be built into the car. The battery for the electric system is stored in the back of the car pretty much on top of the rear axle which causes no space for an engine to power those

wheels and the gas engine is stored in the middle of the car. The reason the battery is stored in the back of the car is because it is the easiest way to assemble and it is the cheapest way to make the car.

## Car Companies

Many car companies are starting to make electric cars. Toyota started making the first hybrid cars back in 2001. The first hybrid was the Toyota Prius. Toyota's hybrid ev cars are the Prius Plug-in and the Prius Prime. The Plug-in, on the other hand, will soon be discontinued so the Prime will take its spot in the Toyota line-up. Lexus, made by Toyota, are only making hybrid cars. They are mainly making a hybrid option in every car. Japanese cars have been in the lead lately on producing them, but the German and American hybrid ev cars are catching on.

Six German car companies Mercedes-Benz, Smart, BMW, Audi, Porsche, and Volkswagen. Mercedes is making hybrid ev cars as an option of a regular gas engine Mercedes. They are making that option for the most luxury cars that they make. For example, the S 550. Smart makes the Fortwo ev. Two seated really small hatchback. BMW is making full electric cars, the i3 hatchback, and the i8 sports coupe, X5 e-drive SUV, and the 3 Series sedan e-drive. Porsche makes the hybrid ev Cayenne E-hybrid. Volkswagen makes the e-Golf all electric station wagon.

For the American cars, Chevy is mainly working with hybrid electric cars. Chevy's cars are the Volt and the all electric Bolt hatchback. Cadillac makes one car called the ELR and that is a plug-in hybrid luxury sports coupe. Ford makes 2 cars and one of them is the C-max Energi, a hatchback and the other one is the Fusion Energi, a sedan which are both hybrid electric cars. Tesla, the nicest American car are all electric. They make the 3 row suv, the Model X with read gull wing doors. and the Model S sedan.

Japanese car makers aren't making hybrid electric cars except for Toyota. Honda just came out with a redesigned Accord Hybrid sedan but that is all Honda is making. Also Nissan has had the Leaf out for a couple of years now which is a hybrid ev. Mitsubishi has the i-MiEV all electric hatchback. Acura, which is made by Honda just came out with a car called the NSX which is an over \$100,000 sports car that is just a hybrid. But since that car is a hybrid it can be **AWD** (all wheel drive). Since there is no big battery, the car is capable of having AWD. The reason a car





company would do that is because they would have to re-design the car's layout of the engine. Also, since it is such an expensive car it makes more sense to only do one drive train. The final reason they might do it is that people who live in snowy climates have AWD cars because it does better in the snow so they could have people buying the car because the car it is a sports car that is AWD car when most sports cars aren't.

## Conclusion

Chevy Bolt

Now since you know all about hybrid ev cars, I hope you new car is getting 700-800 miles per tank of gas and electricity! I am also wanting to know from you how many miles your car went on a full tank on a road trip. Isn't your car a real car but doesn't act like one?

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Tesla Model X



Toyota RAV4



2017 Toyota Highlander



BMW i3

## Glossary

- FWD (front wheel drive) - FWD is when the front to wheels of the car are powered by the car to make the car move
- EV - electric vehicle
- AWD (all wheel drive) - AWD is when all of the wheels are powered by the engine to make the car move
- Drive Train - The drive train are the wheels that power the car to move



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