

Building an EV – Things that you need to know

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With alternative energy developing enough to answer the gasoline crisis the world over, EV conversion is seen as the best alternative to save money on gas and at the same time keeping the environment pollution free. Also, with recession hitting with stupendous results like never before, saving valuable money has become all the more important. Converting and driving an electric car today in America is patriotic. With Barack Obama throwing his weight behind alternative energy research and use, you could be a pioneer in using an electric car and contribute to national concern arising out of the present recession. However, going from one place to another cannot be avoided and such avoidance is not an answer to the question. The best rabbit that one can pull out of the hat to save on fuel costs is to opt for EV conversion and let your vehicle run on electricity. This article answers a few questions that may crop up when you attempt to convert to EV.

With so many online EV websites giving out information on EV conversion, many people have learnt the benefits of such conversion. Building your own electric vehicle or converting your existing gasoline guzzler to work on electricity is not such a difficult job as it appears to be. In case you are new to such a concept and have an inclination to build your own electric car or convert your existing one, the following answers could keep you in good stead.

Differences between an electric car, hybrid and a gas car

Firstly, the above types of cars differ in the aspect of fuel. An electric car uses electricity stored in batteries as fuel while a hybrid runs on both electricity as well as gasoline. A gas car solely relies on gasoline as fuel. All three types of cars are technically different since all of them use different fuels and converting such fuel to kinetic energy needs a different and unique technology.

Cost of conversion

The cost of converting your car to an EV will depend on the parts used. There are various technologies involved and each has its own price. As an alternative, one can also use secondhand parts to convert but the results may be bothersome. As it is a new technology, a few sources are available where you can get some free parts. The cost will also depend on what kind of car you drive on gasoline and needs conversion. With good quality parts and proper technology, an EV conversion process could cost around \$8000. A cheaper option could be to use DIY (do it yourself) kits available for the same.

Traveling distances

This is the biggest inhibition in electric cars. A normal electric car with a normal battery can run for about 100 miles before it would need a recharge. Moreover, in this world of instant gratification, the batteries would need a few hours to charge, unlike gasoline

which you can fill and forget. This distance obstacle can be overcome by using spare batteries. You can also opt for batteries that have a higher AH rating since they can store more electricity. However, all you need to do is to plug-in when you feel you are running out of power and it will still cost less than running the same distance on gasoline.

Research shows that 80% of daily commuting across the globe is less than 40 miles, so you can rest assured that you will get to work and back in one charge.

Speed of an EV

A standard electric car would have a top speed of 80-100 miles an hour. This would depend on the car model and the conversion specifics. If you do a 96 volt conversion the top speed will be less than a 120 volt conversion. Again, you cannot do a 120 volt conversion on a small car and vice versa. As for records, electric cars are known to have broken the 200 mph barrier and have been proven to cover distance over 300 miles on a single charge.

Speed will also depend on the weight, the aerodynamics of the EV and the battery pack voltage. If the voltage is higher, it will generate a higher rpm in the motor which can be harnessed as speed or power as per requirement.

Before opting for a conversion pack, be sure that you have all parameters checked out with respect to your driving conditions, car model, weight distance traveled etc.

Time taken to build an EV

This subject is theoretical and it will depend on how much one can devote to build the car. Working efficiently it could take a week or a month. A lot of DIY kits available in the market claim that a conversion can be done in one week, working in spare time and using the guide that comes with it.

Equipment and part required

A lot of tools and equipment would be required for EV conversion. The main items on the list are the batteries and motors. As a suggestion, deep cell batteries work the best in this application and motors can be AC or the DC type. Other equipment that is needed includes battery rack to mount the batteries, a controller etc. Tools required would be a screwdriver, pliers, welding equipment and an assortment of spanners.

Cost of driving

A standard electric car costs about 2c a mile to operate and when you compare this to an efficient gasoline based car assuming that gasoline costs \$3 a gallon, it has to give you about 65 miles per gallon to match this price. Moreover electric cars do not need regular maintenance like tune-up, smog checks and oil changes.

A lot of other question may also crop up while you are in the conversion process. It is always important to keep a good book or guide that will guide you during the process. All in all, converting your gasoline car to an electric car involves a one-time cost and will be profitable to you and others around you in the long run. Money saved is money earned.