



Top 10 Things to Consider When Purchasing a Green Vehicle

1 Electric Vehicles

2 Charging Stations

3 Driving Habits

4 Purchase Cost

5 Fuel Cost Savings

6 Energy Independence

7 Vehicle Life

8 Reduced CO₂ Emissions

9 Reduced Maintenance

10 Lower Depreciation

1

Electric Vehicles: It is important to remember if purchasing an electric vehicle (EV) the time it takes to fully charge the EV battery. Although an EV can run on a less-than- full charge, it can take from four to twenty hours for the battery to become fully charged; however, a full charge may last from 200 to 400 miles depending on the EV. *Resource: <http://gwrccc.org/vehicle-showcase/>*

2

Charging Stations: While you can plug in and charge your EV, in the event that you are not close to home and low on battery, remember that there are not many public charging stations yet. Although the government and private companies are working on charging station infrastructure, depending where you live, it may be awhile before you can expect this; however, you can locate charging stations near you at the following website: *Resource: http://www.afdc.energy.gov/afdc/fuels/electricity_locations.html*

3

Driving Habits: It is important to analyze your driving patterns if you are considering buying a green vehicle. Unlike traditional vehicles, EVs and hybrids have regenerative braking, so you typically get better gas mileage around town in short trips, rather than on long highway drives. If you drive a lot of highway miles far from home, a totally electric vehicle may prove challenging due to the lack of charging station infrastructure. *Resource: <http://alternativefuels.about.com/od/hybridvehicles/a/RegenerativeBraking.htm>*

4

Purchase Cost: As demand increases, the price of EV's and hybrid vehicles will decrease; however, right now, it can be more expensive to buy a green vehicle versus a traditional vehicle of a similar class. Federal, State or Local tax credits or financial incentives may be available which could off-set the initial purchase cost, but this needs to be thoroughly researched. *Resource: <http://alternativefuels.about.com/> and <http://www.dsireusa.org/>*



5

Fuel Cost Savings: Whether buying an EV, which uses no gasoline, or a hybrid that runs on both battery and gasoline, there is a significant savings on fuel costs for green vehicle. Hybrids usually cost \$.05-\$.07 per mile in fuel to run, compared to traditional vehicles which can cost \$.10-\$.15 per mile. Some manufacturers have advertised that their EV's can cost as little as \$.01-\$.02 per mile to run; however, since this fuel cost is generated only from the electricity grid and utility companies charge different rates for electricity, this may be difficult to quantify. *Resource: http://www.afdc.energy.gov/afdc/vehicles/electric_benefits.html and <http://www.carsdirect.com/car-pricing/new-electric-car-costs-vs-standard-gasoline->*



6

Energy Independence: By investing in alternative energy sources for vehicles such as biodiesel and electricity the U.S. can become more energy independent and less reliant on oil from foreign sources. By driving more energy efficient green vehicles, we help protect our environment. Some green vehicles even use solar panels for heating. *Resource: <http://www.renewable-sources.info/>*



7

Vehicle Life: A green vehicle, although fairly new in the USA, has a longer expected useful life compared to a traditional car. It is expected that hybrid cars will run as well at 250,000 miles as a new car. A green vehicle is a good, long-term investment unlike traditional cars that have an average useable life of between three and seven years and mileage of approximately 100,000 miles. *Resource: <http://gwrcc.org/vehicle-showcase/>*



8

Reduced CO₂ Emissions: Green vehicles drastically reduce carbon dioxide emissions and produce up to 90% fewer pollutants than conventional vehicles. Hybrid vehicles generate approximately 8,500 pounds of CO₂ emissions per vehicle annually, while EV's generate only 7,200 pounds of CO₂ emissions, all of which comes from the electric grid. A traditional gasoline vehicle emits over 13,000 pounds of carbon dioxide into our environment. Emissions can be further reduced by not having to transport as much oil from around the world. *Resource: http://www.afdc.energy.gov/afdc/vehicles/electric_emissions.php*



9

Reduced Maintenance: EV's and hybrid vehicles use regenerative braking, which causes far less wear on brakes than traditional cars. This technology transfers energy from the motor to the battery, which helps recover some of the energy lost while braking. Green vehicles have fewer moving parts and are more cost-effective to run compared to conventional cars since their batteries, motors and electronics require no regular maintenance and there are no fluids to be replaced except brake fluid. *Resource: http://www.afdc.energy.gov/afdc/vehicles/electric_maintenance.html*



10

Lower Depreciation: Traditional new cars have been considered one of the worst investments since they can lose 20% of their value once driven off the lot. Pre-owned green vehicles however, obtain a good value at auction and can sell at a 20% discount compared to conventional vehicles, which have sold for as much as 60% less than Blue Book averages. Lower fuel and operating costs and high demand due to rising gas prices make EV's and hybrids hold their value so well. These factors show that purchasing a new green vehicle may not be a bad investment. *Resource: <http://www.afdc.energy.gov/afdc/vehicles/resale.html>*

Resources:

*Eco-City Alexandria: <http://alexandriava.gov/EcoCity>
Green Building Resource Center: <http://alexandriava.gov/GBRC>
US Dept. of Energy: www.fueleconomy.gov and
http://www.afdc.energy.gov/afdc/vehicles/electric_benefits.html
Greater Washington Region Clean Cities Coalition: <http://gwrcc.org/>
MWCOC Electric Vehicle Planning Initiative: [http://www.mwcog.org/environment/meetings/detail.asp?
COMMITTEE_ID=272&EVENT_ID=7550&MONTH_CHOICE=5&DAY_CHOICE=30&YEAR_CHOICE=2012](http://www.mwcog.org/environment/meetings/detail.asp?COMMITTEE_ID=272&EVENT_ID=7550&MONTH_CHOICE=5&DAY_CHOICE=30&YEAR_CHOICE=2012)*



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