

# Plug Into The Future With Electric Vehicles

An Electric Vehicle (EV) is any vehicle that operates partially or completely on electrical energy. There also are Hybrid Electric Vehicles (HEV) and Plug-in Hybrid Electric Vehicles (PHEV) which are variations of conventional vehicles and electric vehicles which help reduce oil dependency and accommodate users' needs.

## Benefits of Using Electric Vehicles:

1. Emit less greenhouse gases;
2. Operate quieter than conventional engines;
3. Lower maintenance costs;
4. Can be charged overnight; and
5. Reduce oil consumption

## Electric Vehicles (EV):

Electric Vehicles operate on electrical energy obtained from home or building outlets, from an onboard electrical generator or anywhere else. The electrical energy is stored on batteries, flywheels or "super-capacitors", and is distributed to the electric motor using a controller (electronic brain).

## Hybrid Electric Vehicles (HEV):

HEV's operate with a combination of the internal combustion engine of a gasoline operated vehicle with the battery and electric motor of an electric vehicle. The internal combustion unit also known as the energy conversion unit can be fueled with gasoline, diesel, compressed natural gas, hydrogen or other fuels, and the battery can be recharged but never needs to be plugged in.

## Plug-in Hybrid Electric Vehicles (PHEV):

PHEV's operate with electricity and engine power. Unlike HEV's, Plug-in Hybrid Electric Vehicles have a larger battery pack and can be recharged by plugging into a 110-volt electrical outlet. The energy conversion unit can also be powered by gasoline, diesel, compressed natural gas, hydrogen and other fuels.



95 Express Hybrid Buses

## Local Action:

- in 2009, Palm Tran received funding from the Florida Department of Transportation to purchase new Hybrid Buses.
- on January 25, 2010, Broward County launched the 95 Express Route, to provide transportation to those residents traveling from Broward to Miami-Dade County. The buses used for the 95 Express Route are Hybrid articulated buses equipped with Wi-Fi access.
- in September 2010, Miami became one of the first cities in South Florida to park two Electric Vehicle charging stations on the street.

## Safety:

Electric vehicles are required to meet the same safety standards as conventional vehicles including crash and airbag standards. According to the U.S. Environmental Protection Agency (EPA) electric vehicles have been reported to be safer than gasoline powered vehicles because of their lower chances of rolling over or starting a fire in case of an accident.

## Availability:

Brand manufactures like Ford, Chrysler, Nissan and Toyota are producing electric vehicles that can operate at highway speed; vehicles like passenger cars, minivans, sport utility cars, pickup trucks and buses are now available. The conversion alternative is also available for those interested in operating their light-duty vehicles with electricity.

The most common EV's are the neighborhood electric vehicles (NEVs) which have a speed limit of 35 miles per hour.

These vehicles are usually used in gated communities, college campuses and business parks to complete various activities.

### How much do EV's Cost?

Currently EV's cost \$14,000 - \$40,000; they are more expensive than conventional vehicles. However, government incentives are sometimes provided, such as partial sales tax exemption, to reduce the initial purchase value of EV'S.



2010 Hybrid Ford Escape

The Gold Coast Clean Cities Coalition is managed by the South Florida Regional Planning Council (SFRPC). The SFRPC is a regional planning and public agency whose mission is to work with South Florida's public, private, non-profit, and civic leadership to create a better future for south Florida. The SFRPC is one of 11 Regional Planning Councils in Florida and serves three counties: Miami-Dade, Broward, and Monroe; 71 municipalities; and almost 4.3 million residents. For additional information about the SFRPC please visit [www.sfrpc.com](http://www.sfrpc.com)

The South Florida Regional Planning Council.  
3440 Hollywood Boulevard, Suite 140  
Hollywood, Florida 33021

For more information about incentives, alternative fuels and alternative fuel vehicles please visit [www.floridagoldcoastcleancities.com](http://www.floridagoldcoastcleancities.com)

