Understanding EV Technology

Did you know:

- In the U.S., the first successful electric car made its debut around 1890 thanks to William Morrison, a chemist who lived in Des Moines, Iowa. His six-passenger vehicle capable of a top speed of 14 miles per hour was little more than an electrified wagon, but it helped spark interest in electric vehicles.

- In the early 1900's, electric cars were advertised primarily as "ladies' cars" because society assumed that women lacked the mechanical aptitude and physical strength to drive and maintain gasoline-powered vehicles. Electric cars were easier to control, less greasy and required little technical knowledge to drive. They also had limited range and speed. But some pioneering women not only chose gasoline-powered cars, they raced them and drove them across the continent.

The History of the Electric Car

Explore the history of EVs through an interactive timeline from the US Department of Energy and a short video that describes the history of the electric car.

How EVs Work

From the outside, electric Vehicles look very much like cars that have an internal combustion engine (ICE), however, how they work are very different. This animated video unveils the technologies "underneath the hood" of a Tesla Model S, including induction motor technology, the inverter, the lithium-ion battery as a power source, regenerative braking and above all, the synchronized transmission mechanism.

As a consumer, the big question is: which is better – an electric car or internal combustion? Recent improvements in battery technology allowed a strong return of the electric car. This video offers a comparison of these two very opposite technologies in terms of different characteristics of the fuels and types of engines, power dynamics and performance and cost of operation.

Tools for Consumers: Alternative Fuels Data Center

There are great resources and tools to help consumers navigate through the options available for alternative and renewable-fueled vehicles. Two dynamic tools can be found at The US Department of Energy's Alternative Fuels Data Center (AFDC) website and on their link to electric vehicles: electric, hybrid electric, and plug-in hybrid cars.