What is a plug-in car?

In an all-electric car, high performance batteries store cleaner, cheaper, domestic electricity, and an electric motor provides propulsion with zero emissions. In a plug-in hybrid, more batteries than a conventional hybrid allow local all-electric, zero-emission driving with a gasoline engine for longer distances.

Sounds great! Can I get one?

It's very difficult to find an electric car today. Carmakers should offer us the choice of electric cars and plug-in hybrids. The automakers produced great electric cars to meet California's Zero Emission Vehicle Mandate during the '90s. But only a small number of these electric cars were ever offered for sale. The auto and oil industries spent millions lobbying in Sacramento, sued in federal court and successfully eviscerated the Mandate, eliminating any real choice for consumers.

GM, Honda, Ford and Toyota confiscated and destroyed thousands of electric cars, despite offers of cash from satisfied customers. In 2005 as a result of the DontCrush.com campaign to save electric cars, Ford and Toyota agreed to stop crushing their great electric cars.

But the automakers still only sell gas cars. Plug In America and the Electric Auto Association are working for the electric choices we want now.

Plug-in car resources

Plug In America/
Electric Auto Association
www.pluginamerica.org
www.electricauto.org

Who Killed the Electric Car?
Must-see documentary.
Available now on DVD.
whokilledtheelectriccar.com

CalCars Plug-In Hybrid Project
www.calcars.org www.eaa-phev.org

National Plug-in Hybrid Campaign
www.pluginpartners.org

Plug-In Hybrids: The Cars that will Recharge America
a book by Sherry Boschert
www.sherryboschert.com

EV World Online Magazine
www.evworld.com

Plug In America advocates the use of plug-in cars, trucks and SUVs powered by cleaner, cheaper, domestic electricity to reduce our nation's dependence on petroleum and improve the global environment. Join us.

PLUG IN AMERICA

www.PlugInAmerica.org
contact: info@pluginamerica.org

Why Plug-in Cars?

No Gas Required.
Zero Emissions.
No Noise.
No kidding.

PLUG IN AMERICA

Toyota RAV4 EV

All-electric
1997-2003

All-Electric Range: 125 miles
Top Speed: 80 mph
Weight: 3480 pounds
Motor: 50 kW perm. magnet
Batteries: Nickel Metal Hydride (NiMH)
Charger: 220 volts/30 amp; 5 kW inductive
Battery Capacity: 27 kWh

Tesla Motors Roadster

All-electric
For sale now

All-Electric Range: 250 miles
Top Speed: 130 mph
Weight: 2500 pounds
Motor: 185 kW (248 hp peak)
Batteries: Lithium-Ion
Charger: 110 or 220 volts; conductive
Battery Capacity: 56 kWh

Chevrolet Volt

Plug-in Hybrid
2010?

All-Electric Range: 40 mi. Total Range: 640 mi.
Top Speed: 120 mph
Weight: 3140 pounds
Motor: 120 kW perm. magnet AC (161 HP)
Batteries: Lithium-Ion
Charger: standard 110 volt plug
Battery Capacity: 16 kWh
IC Engine: 1.0 L 3 cyl. (71 hp)

• *How many miles can an all-electric car go between charges?*

The RAV4 EV has a maximum range of about 125 miles on one full charge. The Tesla Roadster about 250 miles. The Tesla, like many new EVs, will be capable of charging at any electric outlet.

• *How many miles can a plug-in hybrid (PHEV) go on electricity?*

Plug-in Priuses have been built with 10-40 mile electric ranges. The Volt, for example, will have an all-electric range of 40 miles. After that, the gasoline engine kicks in to recharge the batteries.

• *How long to recharge the batteries of electric cars and plug-in hybrids?*

Overnight charging to full is the idea. Electricity is plentiful and cheap at night.

• *Where do you charge?*

Usually in one's garage overnight, and there are public chargers for electric cars as well in parking garages and shopping centers. (www.evchargernews.com).

• *Is it expensive to charge?*

Less than $1 to fill a plug-in hybrid; $2-4 for an all-electric car.

• *Aren't electric vehicles inefficient?*

EVs are the most efficient cars on the road:
Toyota RAV4 EV: 887 BTU/mile
Toyota Prius: 2250 BTU/mile
Toyota RAV4 Gas: 4423 BTU/mile
fueleconomy.gov/feg/byfuel/byfueltypeNF.shtml

• *Aren't conventional hybrids better?*

A plug-in hybrid can be operated like a conventional hybrid. And since most drivers have access to electricity, a PHEV can also use this cleaner, cheaper, domestic fuel.

• *Isn't hydrogen the solution?*

No. Hydrogen fuel cell cars are 4X less efficient than battery EVs if the hydrogen is produced from electricity. It's 1.4X less efficient if made from natural gas. Where and how will the hydrogen be stored? Who will pay the billions required for this new infrastructure? (Hint - us taxpayers.) With plug-in cars, the infrastructure is already in place - the electric grid.

• *What about the pollution created making the electricity? Aren't you just moving the pollution?*

No. EV emissions are lower even on the 52%-coal U.S. grid. Moving the pollution away from population centers is a good thing. And there's more: utilities have plenty of excess generating capacity at night which could charge millions of plug-in cars. While electricity is getting cleaner and more renewable every year, even the cleanest gasoline car becomes more polluting over time. An electric car, on the other hand, just gets cleaner over time as the grid gets cleaner.

• *Can I charge a plug-in car with solar or wind power?*

Yes. The cleaner the power, the cleaner the car. Putting solar panels on your home or business makes even more sense with a plug-in car. The investment pays off faster, and the car becomes truly zero-emission.

What can I do?

- Join Plug In America.
- Tell your local auto dealer you won't buy a new car until it has a plug.
- Sign the pluginpartners.org petition.
- Tell your friends to see the film Who Killed the Electric Car?
- Buy or make an electric conversion (www.evfinder.com).

www.PlugInAmerica.org