



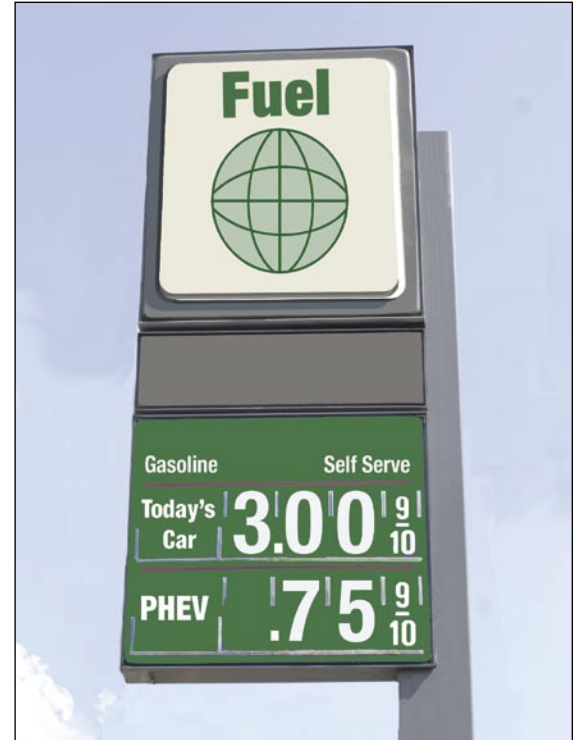
Plug-In Hybrid
Electric Vehicles
(PHEVs)

Plug-In Partners National Campaign

Building a Market for Gas-Optional Flexible-Fuel Hybrids

Plug-In Hybrid Electric Vehicles Can:

- Reduce dependence on foreign oil
- Decrease greenhouse gas emissions from vehicles
- Lower fuel costs
- Make American agriculture a fuel source
- Save and create American jobs
- Increase use of renewable energy



About Plug-In Hybrid Electric Vehicles:

- PHEVs use the same technology as current hybrids, but have a more powerful battery that can be recharged in a standard home outlet. Once charged, PHEVs can go from 20 to 60 miles on battery charge alone.
- An “electric” equivalent gallon of gas will cost 70-80 cents at prevailing electric rates versus the almost \$3.00 national average gasoline price.
- The electric infrastructure is in place and available. Over 40% of the generating capacity in the U.S. sits idle or operates at a reduced load overnight when most PHEVs would be recharged. Tens of millions of PHEVs could be charged without requiring new plants.
- PHEVs can be manufactured with flexible fuel engines, magnifying the economic, environmental and security benefits while also benefiting American agriculture.



Help Build a Market for Flexible-Fuel PHEVs

Join Plug-In Partners, a national grass-roots campaign demonstrating that a market exists for flexible-fuel Plug-In Hybrid Electric Vehicles (PHEVs).

Your organization can join the national effort in support of PHEVs. Partners in this campaign include:

- More than one-third of the 50 largest cities in the U.S.
- County and other local governments
- Over 125 public utilities
- Private utilities including Edison Electric Institute
- Numerous environmental and civic organizations

For a complete list of partners, visit www.pluginpartners.org.

Endorsements

Endorsements demonstrate organizational support for Plug-Ins in the form of resolutions or statements of support by a governing body or environmental, consumer, civic, or other organizations.

Fleet Orders

Advance orders of PHEVs for future fleet needs are an important component of the campaign. These “soft” fleet commitments state that a business or government will seriously consider purchasing PHEVs if they are manufactured.

Petitions

The collection of signatures will allow a large number of Americans to speak directly to automakers. The petition used in Austin states that the signer understands what Plug-Ins are, and that they will seriously consider buying such a vehicle if it is manufactured. Petitions can be signed online at www.pluginpartners.org

Rebates and Incentives

Austin Energy, the City of Austin’s public electric utility, has set aside \$1 million for rebates for Austin Energy customers when PHEVs become available. Electric utilities are a logical source, since the industry stands to receive additional revenues if PHEVs achieve significant market penetration. Rebates or incentives could also be provided by businesses or organizations to their employees, perhaps as a match to a utility rebate or tax incentive.

Press Event

Hold a press conference to announce your PHEV initiative and your participation in the Plug-In Partners National campaign.

Available Tools

For more information, or to assist in the development of a Plug-In campaign in your area, visit www.pluginpartners.org.

Documents available on the website include: City Council and County Court resolutions, fleet order forms, petitions, an eight minute Plug-In Partners video, and links to various resources.



Plug-In Hybrid Electric Cars Enjoy Broad Support

“We’ve got a coalition of tree huggers, do-gooders, sobbusters, hawks, and evangelicals.”

— ***R. James Woolsey, former Director of the CIA
at the January 24, 2006 Plug-In Partners kick-off***

“Plug-In Hybrid Vehicles allow us to use made-in-the-USA energy for most of our driving, breaking the yoke of our dependence on oil.”

— ***Institute for Analysis of Global Security***

“In fact, thanks to the existing grid’s excess capacity at night, it should be possible to support up to 30 percent of the nation’s vehicles equipped with Plug-In batteries of 20-mile range and not have to expand electricity generation.”

— ***Frank Gaffney, President,
Center for National Security Policy***

“When you consider that 78 percent of Americans live within 20 miles of their jobs, and that most car trips — commuting, shopping and dropping off the kids at soccer games — are less than 20 miles, Plug-In Hybrids could run solely on electricity for these types of short trips and commutes.”

— ***Consumer Reports***

“Our studies show a strong market preference for Plug-In Hybrid Vehicles when performance is equal and the cost difference is reasonable.”

— ***Bob Graham, Area Manager, Transportation, EPRI***

“We think the transportation fuel sector should be diversified by utilizing more electricity as a fuel (for) Plug-In Hybrids that can get 100 miles per gallon and allow you to run on electricity alone for 20 to 30 miles, then shift to the combustion engine.”

— ***Gal Luft, Director of the Institute
for the Analysis of Global Security,
an energy-security think tank in Washington***

“We believe that the 50 largest cities in this country, united in purpose, can build a groundswell of demand sufficient to entice carmakers to mass produce what is the logical near term response towards the critical goal of energy independence. We intend to set the example in Austin, Texas.”

— ***Will Wynn, Mayor of Austin, Texas***



Lawmakers prepare to test-drive a Plug-In Hybrid after a Congressional hearing in May. This PHEV is a converted Prius from CalCars.

Frequently asked Questions about Plug-In Hybrid Electric Vehicles (PHEV)

Are PHEVs available today?

DaimlerChrysler has developed and is testing a Plug-In Sprinter Van prototype with an all-electric range of 20 miles. Many conventional hybrids, from sedans to SUVs, have also been converted to Plug-Ins. Some are getting up to 60 all-electric miles per charge.

Does Plug-In technology work?

Yes. This has been clearly demonstrated by several sedan and SUV conversions at the Hybrid Center at the University of California at Davis. Most recently Professor Andy Frank and students at UC-Davis converted a Ford Explorer into a PHEV with a 60 mile all-electric range. Also, the vehicle runs on ethanol when it is not in all-electric mode. Modifications of Toyota's popular Prius have also attracted considerable attention to what have been called 100+ MPG hybrids, and, get even greater mileage when the gasoline is replaced by bio-fuels.

At least two companies are now selling conversion kits for Priuses. Approximately half a dozen companies are manufacturing batteries that are suitable for use in PHEVs.

What is the problem then?

The key obstacle is considered battery cost. Battery technology is advancing rapidly. Prices historically drop with increasing scale of production, especially when material costs comprise a small portion of the total cost. This is the case with advanced batteries, because material for them are relatively inexpensive and plentiful. Much of the current high cost comes from research and development and processing.

What distance should a commercially produced PHEV achieve on the battery alone?

A battery pack capable of powering a PHEV 40 miles could meet the daily driving needs of the majority of American drivers and require little, if any, use of gasoline. Some 78% of Americans live within 20 miles of their jobs. In many cases, drivers of PHEVs would only need to fill up with gasoline a few times a year, versus the current 24-36 times a year on average.

Won't power plants create a great deal of additional pollution powering PHEVs?

Pollution is easier to manage at a central point, such as the stacks of power plants, rather than from millions of vehicle tail pipes. Many power plants today are being modified to lower emissions, and a number of older plants are being retired. Wind-generated power, solar and other forms of renewable energy are pollution free and are becoming more available. The overnight charging of PHEVs matches well with wind-generated electricity (the most abundant green power), much of which is produced overnight due to wind patterns. Wind energy is increasing its share of the national electric supply. As that continues to occur, wind would comprise an increasing share of energy for PHEVs.

What about performance?

A Toyota Prius, modified with a larger Plug-In battery, will have essentially the same accelerating power and speed capability of a hybrid.

How much can PHEVs reduce U.S. oil consumption?

Set America Free, a coalition of prominent individuals and non-profit organizations focused on national security, estimates that if by 2025 all cars on the road are hybrids and half are Plug-In Hybrids, U.S. oil imports would drop by eight million barrels per day.

CONTACT INFORMATION

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