Meet the World’s First 150 MPG Plug-In Prius

By EV World

From-the-field interview with Energy CS principals Greg Hanssen and Peter Nortman on their 150 mpg plug-in Toyota Prius

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Okay... so as to not confuse you any more than you might already be, Energy CS’ plug-in Toyota Prius gets between 120-180 miles per gallon equivalent for the first 50-60 miles of the day. After that, it drops back to the standard Prius 50 mpg average.

So, how’s that work, you ask?

Simple. For the first 50-60 miles, it runs mainly on electricity stored in its brand new, 9kWh Valence U-Charge Lithium-ion Saphion battery pack. The gasoline engine runs so seldom that you would effectively get the equivalent of up to 120 mpg under normal driving conditions using a combination of EV mode driving and electrically assisted gasoline engine driving. With less aggressive driving (and thus lighter use of the gasoline engine) gasoline consumption can be as low as 180 mpg.

Of course, you can drive as far as you like in the normal Prius gasoline-electric hybrid mode, but then you drop back to the still very respectable 50 mpg.

In practical terms, since most people drive only about 25-40 miles a day, you’d use more electric power than the normal Prius. In effect, your energy would come from the power grid and you’d pay for your “fuel” through your electric power bill instead of to the oil company.

Starting to get the picture? See why environmentalists, electric utilities and all those national security wonks in Washington, D.C. are so excited about the plug-in hybrid...
concept? It's an idea whose time has come, though, as you might expect, carmakers are less than enthusiastic about it, arguing that its impractical and too expensive.

What can't be argued is that the technology now exists to make it happen and there are small research programs cropping up all over America. I happen to luck out while in Los Angeles in the end of February and got to see one of those projects just before the car was shipped to Europe for EVS 21, this one created by a small engineering shop located in the foothills, in the heart of Monrovia. That firm is Energy CS, headed by my old friend Greg Hanssen and his partner Peter Nortman. They've taken a stock 2004 Toyota Prius gasoline-electric hybrid, removed the 1.3 kWh NiMH battery pack, installed a 9 kWh Valence U-Charge pack powered by the Austin, Texas company's Saphion lithium-ion battery chemistry.

Editor's note: We recorded an extensive interview with Valence executives the week before travelling to LA. That interview will air in the near future.

In this "from-the-field" interview, Greg Hanssen and his partner Peter Nortman explain the origin of the project, whose spiritual 'godfather' is Felix Kramer with CalCars. Hanssen, who is, to my knowledge at least, the only person to drive a GM EV1 electric car across America twice (recharging at my house on one occasion), does most of the talking in this MP3 audio 'podcast'. Hanssen had just driven the car back from the California EPA office where it had been undergoing preliminary testing most of the day. Within hours, the Energy CS crew would be preparing the car for a cross-country trip to Jacksonville, Florida and a 'date' with a freighter bound for France.

To listen to the interview, use the Flash-based MP3 player just below the picture or download the file to your computer hard drive for later playback on your favorite MP3 device.

You'll be hearing much more about plug-in hybrids the higher the price of gasoline goes, so stay plugged into EV World.

Reader Comments

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08/Mar/2005  Felix Kramer: Want a PRIUS+ someday? We've started a Newslett...
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08/Mar/2005  Ron Lloyd: Cool. Okay, what if I layer a nanotech solar PV s...
08/Mar/2005  Marshall T: Neato! What's the price for those Li-ion battery ...
08/Mar/2005  Bill Yorknes: This is great and just think, fueling this car wit...
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If Bush and his oil/hydrogen cronies see this the...

Re: Marshall T's Comments (as CalCars technical le...

I agree that nanotech paint isn't far off, but it'...

Bell Labs and mPhase are working on nanotechnology...

I wonder what the mpg would have been driving down...

Jerry Olson: 1) going downhill in an (PH)EV can gi...

It's nice but I still want something with no gas ...

Has anyone ever thought of pure electric and using...

re Brian Gilder's comment: Yes, I've thought of a ...

DaimlerChrysler's PHEV Sprinter/Battery Swaps Joh...

FYI: the cost of a Valence pack (17 U1s) in my com...

If future battery technology produces a fast char...

Great job guys!! Hopefully Toyota will catch on...

QUICK THOUGHT- Great Job... I still have a quick t...

Battery swapping idea goes back at least as far as...

This will have truly mass appeal. As a selling p...

http://www.greencarcongress.com/2005/03/maxwel...

MR -- Are you referring to a Tribrid? Coupling ...

Yes Arnold

IEA (International Energy Agency) which advises th...

Swapping batteries is a good idea to keep electric...

As a 30 year electronics inventor, I can testify ...

FOR THE FUTURE OF LITHIUM ION BATTERIES GO TO WWW....

The whole objective of Hybrid mechanism is to extr...

In 5 years time, we must be having a Plugin...

Since your essentially on electric for the first ...

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