

## The debate between 'Plug-in electric vehicles'

Blog post written by Jort Possel. Jort is the **Global Social Media Director at Accenture and** a former blogger on Blogpodium.



Plug-in electric vehicle (PEV) is a catch-all phrase to include both plug-in hybrid electric vehicles (PHEVs) and full electric vehicles (EVs). While this phrase is often used and little distinction made between the two vehicle types, when it comes to consumer demand, these vehicles have very different implications.

However, automotive manufacturers seem to have anticipated the market and drawn a line in the sand favoring one vehicle type over the other, with GM putting its money behind the PHEV, and Renault, BMW and Nissan hedging their bets on the EV. This debate between the PHEV and the EV is one that is most transparent in the market race between GM's Chevrolet Volt and Nissan's LEAF, both released in late 2010. In many ways, the initial success of one over the other is likely to shape the market going forward.

Looking more broadly, the truth is while PHEVs and EVs share a similar grid relationship, they are very different vehicles and will appeal to different consumer segments. Both vehicles will appeal to green-conscious consumers, but while EVs are likely to be mostly city cars, PHEVs may appeal to city, suburban and country drivers, given the dual fuel optionality. As infrastructure becomes more widespread, this appeal may change and EVs may become more widespread.

The Chevrolet Volt/Nissan LEAF debate is most interesting in this respect?if the Volt surpasses or even reaches expected consumer demand, it may conjure a greater market wave of PHEVs; if not, EVs may have the winning tickets.

### **But who will buy PEVs?**

Customer preferences are at the heart of the electrification of transport. To hypothesize on this point and gain some insight on the short-term nature of the market, it is important to understand who are the consumers buying PEVs today. Given the current premium of PEV technology, today's PEV consumer will likely be middle class with a high interest in new technology and who owns a second vehicle. This is evidently a small segment of the consumer market and one not driven by price.

It would thus be possible to assume that these consumers would also be willing to pay a premium for charging their vehicles, and that in the short term the private infrastructure model has the potential to be successful. Further supporting this point is that, while there will be differences by market, home charging and work charging are expected to be the primary charging methods used. However, in the longer term, if PEVs are expected to reach a wider segment of the population, costs will need to be reduced.

The consumer remains at the heart of the debate and will truly determine how fast PEVs scale in the commercial domain.

Accenture is currently researching and analyzing this question and will release the results of a global customer survey in mid-2011.

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Accenture Sustainability Services helps organizations achieve substantial improvement in performance and value for their stakeholders. As part of Accenture's sustainability practices, we started a pilot with 15 Nissan Leaf PEVs to support the sustainability goals and stimulates rapid transition to electric transport. Furthermore, the experiences of the pilot will provide valuable practical information about the use of electric cars.

For more information about Accenture's PEV pilot, please visit:

<http://www.accenture.com/nl-en/company/newsroom-netherlands/Pages/Accenture-zet-in-op-elektrisch-vervoer.aspx> (in Dutch).