

Ford's view on the electric car

Ford has been busily working on plug-in type hybrids since 2005. Initially Ford was working directly and only with Southern California Edison but they expanded their program to include Electric Power Research Institute as well as ten other utility and research organizations across North America. This quarter, Ford will complete the building and deployment of their fleet of twenty plug-in hybrid Escapes and will deploy them to their partnering organizations for demoing in the real vehicle-to-grid world of interconnectivity. The vehicles are equipped with a prototype communication control system that allows the driver to communicate with the vehicle via the Smart Meter through use of wireless Zigbee technology. This route of communication allows the owner of the vehicle to control how the vehicle accesses the charge. Part of the goal of this limited vehicle dispersal is to allow a close examination of the bigger infrastructure issues. They strive to answer how the introduction of mass quantities of EVs onto the grid might affect it and what standards should be adopted. It will also examine what upgrades will be necessary in the area of technology and infrastructure in order to connect these vehicles at home or in a public location. Ford envisions a system that has been integrated into the 'smart home of the future' that allows the owner to make decisions and consider trade-offs involving the energy budget of the household and how the vehicle's energy needs fits into it.

Ford is proving itself to be very forward thinking with the consideration of the implications of the rollout of smart grids, the realtime pricing tariffs and integrating the electric vehicles onto the existing grid. It is a reality that electricity demands are highest during hot days, with the demands dropping considerably at night and on cold days. The addition of night charging vehicles could be a real boon to the electric industry as with the influx of night charging electric cars, their expensive generation and transmission equipment will no longer have long periods of idle time. The National Renewable Energy Laboratory recently released an estimate that if half of the nation's 'light vehicles' were light plug-in hybrids, they would represent a night charging market worth 230 gigawatts. This is very good news for the wind industry because wind tends to blow harder at night than during the day. With a full vehicle to grid integration, those same vehicles could sell back some of their energy into the grid on those hot summer afternoons when electricity is expensive, while also helping to prevent the starting up of more expensive and less environmentally friendly generation methods. In effect the multitude of cars could act almost as remote storage devices for power created at night, turning it back into the power companies during the day.

Ford is planning on rolling out their first fully electric cars into the 2010 and 2011 markets while their first true plug-in hybrids are scheduled to make it to the consumer market in 2012. Ford is also looking beyond the electric vehicles into the hydrogen fuel cell vehicles which they have had versions on the road since 2005. These vehicles have combined to have rolled over a million miles. Ford estimates that electric power will be the stepping stone to the more sustainable hydrogen solution to transportation, especially if IBM is able to crack the lithium air battery they are currently working on. This breakthrough will give electric vehicles a travel range more equal to that of a normal gas powered engines of today.

About the Author

This article was written by Tom Sangers on behalf of Foray Vans who offer [Ford Transit](#) vans at great prices as well as other great Ford [Vans for Sale](#).

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