

Are Electric Vehicles or Hybrids The Answer To America's High Fuel Prices And Dependency On Foreign Oil?

By Randy Olson

With gasoline prices soaring towards \$4 a gallon and diesel already beyond that threshold, everyone is feeling the pinch. The high fuel costs don't just affect the cost of commuting to work each day, it also affects your decision about where you will drive for vacation, or take the family to a restaurant or movie. But more importantly, high fuel prices are now impacting everything else in our economy such as food prices and other goods and services that we need each month. Transportation costs for consumable goods have skyrocketed and there seems to be no end in sight. Is there anything you can do about it?



Last year, hybrid electric vehicles (HEV's) made up only 2% of total vehicle sales in the United States. That number is quickly growing as demand is swelling and auto dealers are now having a tough time keeping them in stock. Specialized companies are beginning to spring up that will convert existing HEV vehicles over to a PHEV (plug-in hybrid electric vehicle) model to enable the vehicle owner to s-t-r-e-t-c-h their mileage by using battery power as much as possible and limiting their use of gasoline power. Let's examine the difference between HEV and PHEV. The Toyota Prius is an example of an HEV car. While the stock version of the Prius gets about 50 miles a gallon and reduces emissions, it is still ultimately just a gasoline car. A PHEV car is different because it can be fueled by electricity from an electrical outlet. A PHEV uses less gas than an HEV because it can draw energy for a longer period of time from its larger battery. For example, the 50mpg efficiency of the Toyota Prius can be improved to around 100mpg when morphed into a PHEV. When the electrical energy charge in the vehicle is exhausted, a PHEV is no more efficient than an HEV. The same conversion can be achieved with a Ford Escape hybrid. The process of converting an HEV to a PHEV involves adding a charger and a power cord while adding batteries that have much larger storage capacity. There are presently four companies that we have identified who will convert existing HEV's to PHEV's. The companies include Energy CS, Hybrids Plus, HyMotion, and Edrive.



Some electric cooperatives in other parts of the nation have been active in testing and evaluating the PHEV (plug-in hybrid electric vehicle) method of transportation. It is part of a 2-year study by the (CRN) Cooperative Research Network of the (NRECA) National Rural Electric Cooperative Association. Their stories have been documented in a national publication called "*Electric Co-op Today*" which is published by the NRECA. We feel that this is valuable information for all of our Wayne-White Counties Electric Cooperative members, so we have requested and been granted permission to reprint some of their stories highlighted in yellow.

1,000 Mile Spin for the Newest PHEV on the Block

By Michael W. Khan (courtesy *Electric Co-op Today*)

PHOENIX – Once Roger Kuhlman's Ford Escape was converted to a plug-in hybrid, he wasted no time.

Pulling out of the Hybrids Plus shop in Boulder, Colo., Jan. 11 with their engineer, he drove it around the area to make sure everything was working properly. Satisfied that it was, Kuhlman set off the next morning on a 1,000 mile trek to a Cooperative Research Network (CRN) meeting here in Phoenix.

"Everything works well," said Kuhlman, engineering and operations manager at Salem Electric, Salem, Ore. "The first hour we're getting 80 to 100 miles per gallon. After the battery is depleted we drop down to about 30 miles per gallon." That's nothing to scoff at, especially considering he was once driving a Ford Explorer that only got about 12 miles to the gallon. **(continued next page)**