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The Hybrid Vehicle and Alternative Fuel Report

October 15, 2014

This report is a summary of articles appearing in popular, business, and technical media referring to the impact of fuel costs and fuel efficiency on vehicle technology, development, and markets. At the end of the report is a list of all articles summarized, with hyperlinks to internet sources where available. Some hyperlinks may require free registration or paid subscriptions to access. ***The Hybrid Vehicle and Alternative Fuel Report*** **(ISSN: 1946-1011)** is compiled, written, and edited by Thomas L. R. Smith, Ph. D., Economic Analysis Branch of the Budget and Financial Analysis Division, Washington State Department of Transportation. Contact ***The Hybrid Vehicle and Alternative Fuel Report's*** editor at smithtm@wsdot.wa.gov or (360) 705-7941. Contributions of news items, original articles, positive comments about ***The Report,*** and cookies are welcome.

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NATIONAL HYBRID, ELECTRIC, AND PLUG-IN VEHICLE SALES

September's sales numbers offer a mixed bag with good news and mediocre news, according to the analysis by *HybridCars* (Cobb, October 2, 2014). After "an exceptionally strong August," car sales, including electric and hybrids, returned to "normal levels." Even though sales dropped from August, September 2013 sales were up for electric and regular cars, when compared to last year.

Hybrids accounted for 2.53% of new car sales in September. The decline was primarily due to decline in the three Prius models, which accounted for 44.37% of hybrid sales. Six of the top ten hybrids, by sales, were Toyotas, which still dominates the hybrid market with 65.49% of hybrid sales.

Plug-in hybrids were also down from August, taking only 0.27% of the new car market. The Chevy Volt dominated plug-ins, selling 41.53% of all plug-ins. Ford's two plug-ins were next, but combined, failed to exceed Volt's numbers. *HybridCars* speculates that Volt sales may have been down because Chevy reduced production in August.

Battery cars did much better, taking 0.48% of car sales. The Leaf, lead the charge, while the Tesla came in second. The Leaf accounted for 48.15% of battery car sales. Most likely, sales numbers like these, even though they represent seasonal sales, will generate a new spate of analyses telling us that hybrids and electric vehicles are a dying breed.

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HYBRIDS

The University of Michigan's Transportation Research Institute (UMTRI) has released an abstract of its survey of vehicle owners that asks, "What do Current Owners of Hybrids and Non-Hybrids Think about Hybrids" (Sivak & Schoettle, October 2014)? UMTRI asked owners of both hybrids and conventional vehicles their thoughts on vehicles. Most of the findings were not too surprising, however the main reason hybrid owners own hybrids is to reduce their environmental impact, not to save money. Hybrid owners report very few problems with the electrical or hybrid-specific parts of their cars. Most owners, 80% plan to replace their hybrid with another hybrid, while over 27% of hybrid owners plan to replace their hybrid with a plug-in hybrid. Of the hybrid owners who do not plan to replace their hybrid with another hybrid, 1/6 of those plan to replace their hybrid with an electric vehicle. One-third of conventional vehicle owners say they plan to buy a hybrid for their next vehicle. The other 2/3 are either just not interested in a hybrid or they believe the initial cost for a hybrid is too high. The full report is not online yet, but we thank *Hybrid Report* subscriber and Chief Technology Officer of the Canadian Automated Vehicles Centre of Excellence Paul Godsmark for sending us the abstract.

According to a study by Insurance.com, 27% of the owners of Toyota's Prius C have lead feet and have received traffic tickets. That puts the Prius C at number 20 on the list of most ticketed cars, Spokane's *KREM TV* (October 2, 2014) says. The Insurance.com study looked at insurance quotes for an 18 month period and rated 526 cars for speeding tickets. Owners of regular Prii fall way down on the list. Insurance.com offers no explanation why Prius C owners get more tickets. *Hybrid Report* subscriber Anna Lee provided this news.

In a move that has some people scratching their heads, New Jersey Transit's board voted to buy 37 diesel-electric hybrid buses, *North Jersey* (Maag, October 8, 2014) reports. The transit authority plans to use the buses on long-haul routes, where there is little benefit or use for the hybrid technology. The transit organization defends its decision by saying that it was cheaper than building a new compressed natural gas facility, if it bought that type of bus.

ELECTRIC VEHICLES

The Chinese company that builds Apple's iPhone will put together an electric car, *The Christian Science Monitor* (Edelstein, September 29, 2014) monitored. Foxconn's car will sell for less than $15,000. The company is putting $811 million in a factory complex in Shanxi province. Foxconn, headquartered in Taiwan, already makes electric car batteries. There is no word if the Foxconn car will be built for export. Most likely, Foxconn will build the car for the Chinese market.

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There are many efforts to improve the range of electric vehicles. Most of them look at improving battery technology. A European Union effort looks at making the cars smarter, so that the car can manage braking, navigation, and speed to increase battery efficiency and life. The EU's OPENER, which stands for OPtimal ENErgy consumption and Recovery, is slated to do that and projects a 30% savings in energy, *Phys.org* (Community Research and Development Information Service, October 1, 2014) says.

ALTERNATIVE FUELS

Linde, a company that makes industrial gas like liquid nitrogen, is teaming with Daimler to build hydrogen fuel stations across Germany, *Automotive News Europe* (Reuters, October 8, 2014) reports. Daimler plans to sell hydrogen fuel cell vehicles in Germany by 2017. There are sixteen stations operating in Germany, and this initiative will add another 20. Way back in the very first issue of this *Report* in 2005, we reported that Daimler was planning to introduce a fuel cell vehicle for commercial sale in 2012.

COMING TO A LOCATION NEAR YOU: The latest news on new charging stations which may or may not be somewhere close to you.

United States: Juneau, Alaska, opened the first of five charging stations recently, thanks to a grant form Florida's Funders Network for Growth and Livable Communities and from Juneau Hydropower, *Alaska Public Television* (Kelly, September 29, 2014) reports. The first charger is at Eagle Beach State Recreation Area, a 27 mile drive from downtown.

The town of Killingly, Connecticut, will open a charger at Town Hall, the *Norwich Bulletin* (Penney, September 28, 2014) alerted. A grant from the State's Department of Energy and Environmental Protection made the charger possible. The charger will be free for three years.

Nissan Leaf donated a fast charger to the City of Palo Alto, Tesla's hometown, the *Silicon Valley Business Journal* (Hepler, October 9, 2013) journaled. This is the first fast charger in California that is located at a curbside location, rather than in a parking garage. Even though Palo Alto is Tesla's hometown, there are no chargers from Tesla's proprietary network in town.

Rehoboth, Delaware, will have a new charging station and two charging parking spaces at a city lot near the Henlopen Condominiums, the *Wilmington News Journal* (Pacella, October 10, 2014) said. The charger and one year of electricity is provided by a grant. After the initial test, the City can decide to continue the charger and decide if it will charge parkers for charging.

Norwalk Community College in Connecticut opened two new chargers yesterday, the *Norwalk Daily Voice* (Funk, October 11, 2014) vocalized. The charging station,

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funded by a Department of Energy and Environmental Protection Grant, is in the West Campus A-Wing parking area. Charging is free for the first three years.

The Oakhurst Inn in Charlottesville, Virginia installed a Tesla charging station *Newsplex* (October 14, 2014) reported. To attract other customers, the Inn also installed chargers that other vehicles can use.

Around the World: No reports.

OTHER TECHNOLOGY

Singapore's scientists at Nanyang Technologicial University are on the verge of a revolution which will pretty much do away with two of the drawbacks of electric cars: battery charging time and battery life, *C|Net* (Franco, October 13, 2014) says. The new lithium battery that uses titanium dioxide for the anode can charge to 70% in two minutes. A car battery, using the technology, should be able to charge in five minutes, comparable to filling a tank with gas. Batteries made from the stuff should last up to twenty years.

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ARTICLES REFERENCED

Cobb, J. 2014, October 2. September 2014 Dashboard. *HybridCars*. Retrieved: http://www.hybridcars.com/september-2014-dashboard/

Community Research and Development Information Service. 2014, October 1. Using intelligence to unlock the market for electric vehicles. *Phys.org*. Retrieved: http://phys.org/news/2014-10-intelligence-electric-vehicles.html

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Edelstein, S. 2014, September 29. iPhone manufacturer Foxconn to sell $15K electric car. *The Christian Science Monitor*. Retrieved: http://www.csmonitor.com/Business/In-Gear/2014/0929/iPhone-manufacturer-Foxconn-to-sell-15K-electric-car

Franco, M. 2014, October 13. New batteries charge 70 percent in 2 minutes. *C|Net*. Retrieved: http://www.cnet.com/uk/news/new-batteries-charge-70-percent-in-2-minutes/

Funk, L. 2014, October 10. Norwalk Community College Prepares to Add Two Car-Charging Stations. *Norwalk Daily Voice*. Retrieved: http://norwalk.dailyvoice.com/schools/norwalk-community-college-prepares-add-two-car-charging-stations

Hepler, L. 2014, October 9. Nissan tweaks Tesla on its home turf, donating curbside car charger. *Silicon Valley Business Journal*. Retrieved: http://www.bizjournals.com/sanjose/news/2014/10/09/nissan-tweaks-tesla-on-its-home-turf-donating.html?page=all

Kelly, C. 2014, September 29. Electric vehicle owners power up at Eagle Beach. *KTOO-TV*. Retrieved: http://www.ktoo.org/2014/09/29/electric-vehicle-owners-power-eagle-beach/

KREM 2. 2014, October 2. Top 20 vehicles for getting tickets. Retrieved: http://www.krem.com/news/Top-20-vehicles-for-getting-tickets-277835851.html

Maag, C. 2014, October 8. NJ Transit OKs $35.2M purchase for new diesel-electric hybrid buses. *North Jersey*. Retrieved: http://www.northjersey.com/news/nj-transit-oks-35-2m-purchase-for-new-diesel-electric-hybrid-buses-1.1104874

Newsplex. 2014, October 14. Electric Vehicle Charging Stations Installed at Oakhurst Inn. Retrieved: http://www.newsplex.com/home/headlines/Electric-Vehicle-Charging-Stations-Installed-at-Oakhurst-Inn-279114061.html

Pacella, R. 2014, October 10. Questions answered for Rehoboth charging stations. *Wilmington News Journal*. Retrieved: http://www.delawareonline.com/story/money/business/2014/10/10/questions-answered-rehoboth-charging-stations/17058293/

Penney, J. 2014, September 28. Killingly to install electric car charger station. *The Norwich Bulletin*. Retrieved: http://www.norwichbulletin.com/article/20140928/NEWS/140929528/1994/NEWS

Reuters. 2014, October, 8. Daimler, Linde to build new hydrogen fuelling stations in Germany. *Automotive News Europe*. Retreived: http://europe.autonews.com/article/20141008/ANE/141009794/daimler-linde-to-build-new-hydrogen-fuelling-stations-in-germany?cciid=email-ane-daily

Sivak, M., and Schoettle, B. 2014, October. *What do Current Owners of Hybrids and Non-Hybrids Think about Hybrids*? Ann Arbor: The University of Michigan Transportation Research Institute.

That is all.

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