



## The Hybrid Vehicle and Alternative Fuel Report

July 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](mailto:smithtm@wsdot.wa.gov) or (360) 705-7941. Contributions of news items, original articles, and positive comments about *The Report* and cookies are welcome.

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**National Hybrid, Electric, and Plug-in Vehicle Sales:** June was an OK month for hybrid sales; however, it did not quite reach the level set by the overall auto market according to numbers posted at the [Hybrid Cars](http://www.hybridcars.com) (Cobb, July 2, 2014) website. The three Prius models dropped from the previous month, which set the tone for the hybrid market. Hybrids sales for June dropped 25% from May's sales. Hybrids took 2.77% of the market.

Plug-in hybrids, on the other hand, performed a little better than the auto market. The Ford Fusion Energi led the Plug-in market, selling 1,939 vehicles for 29.8% of the Plug-in market. Chevy Volt sold 1,777 or 27.3% and the Prius Plug-in dropped to third place, selling 1,571 or 24.1%. Plug-ins accounted for 0.46% of new car sales.

The Nissan Leaf took first place in sales with 2,347, or 47.1% of the battery market, while the Tesla came in a distant second with 1,400 sold, or 28.1%. All the other electrics had sales levels so low there is not much point in discussing them. Battery car sales accounted for only 0.35% of the market. The three categories together made up 3.58% of the new car market.

### HYBRIDS

National Public Radio affiliate [Michigan Radio](http://www.michiganradio.com) (Newsroom, July 10, 2014) asks, "Is the hybrid hype dying down?" The article quotes some statistics and says that compared to 2013, hybrid sales are down for the first six months of 2014. Hybrids and electric vehicles only accounted for 3.6% of the market, rather than 3.8% for last year. *Michigan Radio* says some of the new resistance to hybrids is that people are used to the levels gas prices have risen to. The article also points out that an SUV driver will tend to look at other SUVs and pick a more fuel-efficient version rather than downsize. Because all cars and engine types are gaining in fuel efficiency, there is less incentive to go to alternative fuel.

The Greater Wellington (New Zealand) Regional Council's Public Transportation Plan will call for replacing its trolley fleet with hybrid buses as an interim step to full electrification, *Australasian Bus & Coach* reported. The shift to hybrid will begin in 2017. The plan has to be approved by the full Regional Council.

Closer to home, the Marin Transit District in California's Marin County will buy seven 40-foot and four 30-foot diesel-electric hybrid buses if they can work a deal with the California Air Resources Board (CARB), *Marin News* (Johnson, June 24, 2014) reports. The holdup revolves around a CARB rule that requires diagnostic systems that will not be on buses until 2017. California requires the systems, but the Federal Government does not require them on buses until 2017, so no one installs them yet. Marin Transit is trying to get a waiver of the rule to buy the buses.

Peugeot is showing off an "air" hybrid that uses an internal combustion engine (ICE) and compressed air to drive the vehicle, the United Kingdom's *Daily Mail* (Massey, July 3, 2014) sends. The vehicle, the Peugeot 2008, is an SUV that uses an ICE coupled with an air compressor and hydraulic actuator to store and release energy. Because it uses a hydraulic actuator to store energy, it does not require a bank of batteries. The car is due to go on sale in 2014 and has a sticker price of about \$27,400. The car gets 94 mpg, Peugeot engineers claim.

If you live in Texas, own a diesel-engine vehicle, and want to buy a hybrid, the Texas Commission on Environmental Quality (TCEQ) has \$7.7 million in grant money available to replace your old diesel, *The Rancher* (July 10, 2014) recons. TCEQ may fund up to 80% of the purchase price, however, there are some catches. Applicants must have a fleet of 75 or more vehicles registered in the Blue Bonnet State, plan to replace at least 20, and the change must result in a 25% reduction in emissions of nitrogen oxides. The new vehicles have to be used in specific parts of Texas for five years or 400,000 miles. Grantees aren't restricted to hybrids. Natural gas, hydrogen, and electric vehicles will also qualify. You have until October 3, 2014 to get your application in. Visit the grant [website](#) for more information.

## ELECTRIC VEHICLES

We can only hope that the name of the "new" all-electric tug boat on the Erie Canal is "Sal," after the mule of song fame.<sup>1</sup> The tug boat was built in 1928 for use on the canal. In 1980, the boat received a new diesel engine. That engine has now been replaced with a fully-electric engine, the New York Governor's office (2014) said in a press release in *Boating Industry*. The boat was refurbished by New York State's Elco

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<sup>1</sup> Thomas S. Allen, "Low Bridge Every Body Down (or Fifteen Years on the Erie Canal)," F. B. Haviland Publishing Co., 1905.

Motor Yachts. The tug is the first all-electric workboat on the Canal and will be used for dredging and other canal maintenance.

I'm pretty sure my late biker-brother is rolling over in his grave at Arlington National Cemetery, but Harley-Davidson is testing an all-electric motorcycle, the *Seattle Post-Intelligencer* (Johnson, June 19, 2014) posted. The new Harley is called the LiveWire. While the motorcycle does not have the typical Hog engine sound that Harley-Davidson once attempted to trademark, reports say the LiveWire makes a sound similar to a jet engine. There is no word if or when the electric Harley will go on the market.

A cab driver in Quebec City, Canada, is the first in that city to go all-electric, *CTV Montreal* (June 21, 2014) reported. Christian Roy bought a Tesla Model S to use as a taxi. The Tesla cost \$97,000 (\$90,934.66 US).

While not quite requiring the installation of chargers in every new building, the Palo Alto City Council now requires all new multi-family, hotel, and commercial buildings to accommodate charging equipment. The ordinance passed in June requires the wiring to be in place to ease installation, *Palo Alto Weekly* (Sheyner, July 3, 2014) reports. For multi-family buildings, builders will have to install a charging outlet or charger for each housing unit and the wiring to enable charging for 25% of guest parking. Hotels will have to have chargers for 10% of their parking spaces and wiring for up to 30%. Commercial buildings will have to have chargers for 25% of their parking and the ability to expand to 30%.

You may want to clear your calendar from December 17 to December 19, 2014 for the Institute of Electrical and Electronics Engineers' (IEEE) International Electric Vehicle Conference (IEVC) 2014. You may also want to save a lot of money. Even though the registration fee is only about \$800, you'll need to have airfare to Florence, Italy. We are pretty sure we will not be going; but you can find details about the conference at the IEVC [website](#).

Several San Francisco Bay area governmental organizations banded together to make "one of the largest single government purchases of all-electric vehicles in the country" (Associated Press, July 10, 2014) radio station *WTOP* broadcasted. The cities, counties, and water authorities bought 90 electric cars with a \$2.8 million Metropolitan Transportation Commission grant.

Rather than toddle<sup>2</sup>, Chicago's Mayor Rahm Emanuel is encouraging Chicagoans to drive electric vehicles, *The [Columbus, Indiana] Republic* (Associated Press, July 12, 2014) reports. To help Windy Citizens make the move to electric vehicles, the City

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<sup>2</sup> Fred Fisher, "Chicago (That Toddlin' Town)", 1922. Toddle: to walk with short tottering steps in the manner of a young child or to take a stroll, saunter; Merriam-Webster Online dictionary.

unveiled a website [Drive Electric Chicago](#) where information like how to install a charger and the location of the nearest charger can be found.

## ALTERNATIVE FUELS

Hyundai, the Korean automaker leased its first mass produced hydrogen car in the US to a California insurance agent, [Bloomberg](#) (Ohnsman, June 10, 2014) reported. The sport-utility Tucson was leased to the insurance man for \$499 per month. The lease included hydrogen for three years. In 2015, both Toyota and Honda are expected to start leasing hydrogen vehicles in California. The Tucson has a range of 265 miles. There are ten hydrogen stations in the state.

Hawaii Mass Transit Agency (HMTA) will put hydrogen fuel cell vehicles on the road in 2015, [Next-Gen Transportation](#) (June 19, 2014) reports. The shuttle buses will carry 25 passengers and are designed by US Hybrid Corp, of Torrance, California.

The U. S. Navy plans to use up to 50% advanced biofuels for deployed ships and aircraft by 2014, the Commander of U. S. Pacific Fleet Public Affairs (Matsunaga, July 3, 2014) says on the [Defense Video and Imagery Distribution System](#). The Navy plans “to sail the Great Green Fleet 2016” starting with the Rim of the Pacific (RIMPAC) Exercise in that year. But RIMPAC won’t be a one-off event. The Navy will continue to use biofuels after the exercise.

**Moo Juice:** The EPA is allowing a new fuel source to qualify under the biofuel Renewable Fuel Standard (RFS), the [Union of Concerned Scientists](#) (Martin, July 10, 2014) blogged. The significant is that the new fuel source is not a liquid: it is cow manure. The EPA will allow people to develop methane digesters which will provide fuel for electric generators. The [Union of Concerned Scientists](#) hails this decision because it is a biofuel that does not compete with food crops or require additional land.

**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:** “Goin’ to Jackson:”<sup>3</sup> Jackson, Wyoming, has a new charging station on the town square, the [Casper Star Tribune](#) reported. Charging is free until further notice.

San Francisco International Airport will install four fast charging stations in the Cell Phone Lot, [CBS San Francisco](#) (Duckworth, June 19, 2014) said. The Airport received a \$500,000 grant from the Bay Area Air Quality Management District for the chargers.

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<sup>3</sup> Gabby Rodgers [Billy Edd Wheeler] and Jerry Leiber, “Jackson,” KAPP Records, 1963.

The University of Massachusetts Worcester campus has four new chargers, the University's Medical School (O'Reilly, June 20, 2014) reports in [UMASS Med Now](#). Two of the chargers are level two chargers, while the other two are level one, 120 volt chargers. Parkers are limited to three-hours at a time, but can make reservations for the chargers.

The Washington State Department of Transportation (hey, that's us!) installed four level two chargers in the Olympia Headquarters parking garage (see pictures below). WSDOT official vehicles have priority for charging, but the spaces are open to employees and members of the public who have business with WSDOT. WSDOT asks car owners not to charge longer than four hours.



WSDOT Volt, Leaf, and Charging Station © 2014 Thomas L. R. Smith

Maui Electric opened that Island's first "open access" fast charging station on West Kamehameha Avenue in Kahului, [Maui Now](#) (Staff, June 24, 2013) says. The charger is an "open access" charger, because drivers charging their cars do not have to be a member of a network to use the charger. The charger rates vary by time of day and day of the week.

Tanger Outlet mall in Commerce, Georgia, Northeast of Atlanta, opened four free charging stations, [Access North Georgia](#) (Stanford, June 26, 2014) reports. The chargers are on the ChargePoint network.

The Hyatt Regency Lost Pines in Bastrop County outside Austin, Texas, will have two charging stations installed in a joint project with Bluebonnet Electric, the [Austin Statesman](#) (Staff, June 26, 2014) stated. The new chargers will be ChargePoint fast chargers.

Bethel, Connecticut gained two charging stations, the [Danbury News-Times](#) (O'Malley, July 3, 2014) announced. One charger is at the Metro-North train station while the other is located downtown. The charging stations are part of a State-wide initiative.

There is a new quick charger in Middlesex, Vermont, the [Daily Hampshire Gazette](#) (Ring, July 7, 2014) gazetted. The charger is located somewhere off Interstate 89. There is also a level 2 charger at the site. The Charger is part of a joint initiative of the

State of Vermont, Green Mountain Power, and the Province of Quebec to establish a charger network through Vermont.

Montrose, Colorado, opened a level two charging station at Centennial Plaza, *KREX Television* (Kuestner, July 10, 2014) reported. Montrose is in Southwest Colorado between Grand Junction and Durango at the junction of US 50 and 550.

Several towns in the Old North State<sup>4</sup> will install charging stations thanks to grants from North Carolina State University's North Carolina Solar Center, South Carolina's *The State* (Barr, July 13, 2014) stated. Wake Forest will install a charger at Town Hall, while Edenton, Newton, Tarboro, Smithfield, and Raleigh will also get chargers.

**Around the World:** The Waterloo Region in Ontario, Canada, is getting three new charging stations to join the ten already in the region, the *Cambridge Times* (June 18, 2014) tells. The Waterloo Region Museum in Kitchner will get one of the chargers, while the parking lot in downtown Cambridge gets the second, and uptown Waterloo will get the third. The chargers will cost one Loonie (\$0.94, US) per hour.

Azerbaijan's Baku area will get fast chargers near the Baku airport the *Azeri Press Agency* (June 26, 2014) reports. The fast chargers have been installed by the State Oil Company of the Azerbaijan Republic.

Beijing will develop a network of 10,000 charging stations by 2017, the *Want China Times* (Xinhua, June 28, 2014) reports. The Beijing Municipal Science and Technology Commission is spearheading the plan to install the chargers across the Chinese Capital.

The island nation of Sri Lanka will have 40 new chargers available next month, Sri Lanka's *The Sunday Leader* (Silva, July 14, 2014) leads. Aprico Finance will install the chargers at Aprico Supermarkets around the island nation. There are 122 electric vehicles in Sri Lanka.

## OTHER TECHNOLOGY

We regret that there was no other technology to report on in this issue.

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<sup>4</sup> The Editor's Home State from 1955 to 1961.

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*That is all.*