



The Hybrid Vehicle and Alternative Fuel Report

September 15, 2016

The fine print: 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 articles 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. (hereinafter referred to as "The Editor"), 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, cookies, and positive comments about **The Report** are welcome.

TABLE OF CONTENTS

HYBRIDS	2
ELECTRIC VEHICLES.....	2
ALTERNATIVE FUELS.....	5
COMING TO A LOCATION NEAR YOU	5
OTHER TECHNOLOGY	6
SUBSCRIBING TO <i>The Hybrid Report</i>	7
ARTICLES REFERENCED	8

National Sales for August 2016

It was a mediocre month for passenger car sales in August, relatively good for electric and plug-in hybrids, but not very good for hybrids, according to sales numbers and analysis from [HybridCars](#) (Cobb, September 2, 2016).

The overall market was flat from July to August, while hybrid sales were down just a little from July. The bad news was that hybrids were down 15% compared to August a year ago. Even though Prius sales (which drive the hybrid sector) have been ticking up since January, it seems that sales have stalled. While Prius sales are stagnant, Toyota's RAV4 are doing well, inching up with about half the sales of the liftback Prius. Toyota commands the market with 73.5% of the hybrid market. The three Prius models make up 40.3% of all hybrid sales. Hybrids took 2.14% of the total new car market (Cobb).

The plug-in hybrid market was led by the Chevy Volt, with 32.7% of the market, followed by Ford's Fusion Energi at 22.3%. With Ford's combined sales, it leads the sector with 33.4%, not even a full percentage point above Chevy. BMW's X5 is in third place with 13.8% of sales, Ford's C-Max is in fourth, and Audi's A3 round out the top five. Plug-in sales were up 63% compared to last August. Plug-in hybrids accounted for 0.42% of the new car market (Cobb).

The Tesla Model S led the electric car sector with 37.2% of sales and the Model X was second with 22.1%. Nissan's Leaf is in third with just 12.4%. BMW's i3 and VW's e-Golf round out the top 5. Electric sales were up 10.8% over July and 65% over last August. Electric car sales were a whopping 0.57% of the new car market (Cobb).

Combined, these three groups accounted for 3.13% of the new car market (Cobb). It is easy to blame low gas prices as the reason for the poor performance of hybrids, although the relatively stellar performance of electric and plug-ins really make us want to look elsewhere for the reasons for declining sales.

HYBRIDS

The Dubai Police acquired ten Toyota Prius hybrids, [Gulf News](#) (September 4, 2016) notes. Major General Anas Abdul Rahman Al Matroushi of the Dubai Police says the addition of the Prii will allow the Dubai Police to “protect lives and property and the preservation of the environment and natural resources.”

If you live in Athens County Ohio, you can get an interest free loan from the Ohio University Credit Union until December 2016 to buy a hybrid or electric car, [The \(Athens\) Post](#) (Fair, September 5, 2016) posted. The \$30,000 loans are subsidized by Upgrade Athens County for one of 35 approved vehicles. Loan applicants have to live or work in Athens County. Seven people have received loans so far. The program began in December 2015.

Canada’s University of Waterloo just opened a hybrid and electric car research facility, [CTV Kitchener](#) (Bowden, September 7, 2016) says. The Green and Intelligent Automotive Research Facility will concentrate on computers that regulate “the flow of power” to improve fuel efficiency. The new lab is a joint effort with the university, Toyota Canada, Ottawa Provincial Government, and the Canadian Federal Government. About 150 grad students will work at the lab.

The City of Boise will add six plug-in hybrids and electric vehicles to its fleet, the [Idaho Statesman](#) (September 9, 2016) stated. Half of the vehicles are Nissan Leaves, while the hybrids include a Chevy Volt and Ford Fusion. The last vehicle is an electric Ford Focus. Boise purchased the vehicles with a federal grant awarded to Republic Services and transferred to the City.

ELECTRIC VEHICLES

Correction: In an article on North Cowichan’s acquisition of electric vehicles, we stated that the vehicles would save the municipality \$8,000 per year. We were incorrect. Reader Dan Paulson pointed out that the article we [linked](#) to said the vehicles would save \$8,000 over ten years. And because those are Canadian dollars, that’s only \$6,186.68.

Nutonomy, a company founded by Massachusetts Institute of Technology engineers is testing electric autonomous taxis in Singapore, [The Guardian](#) (Harris, August 24, 2016) says. This is a limited test, restricted to a business park in Singapore. Riders will be able to use an app to catch a ride from a Mitsubishi i-Miev or Renault Zoe. Nutonomy will eventually have 12 electric taxis available. During the test, there will be a driver behind the wheel for emergencies; however, the plan calls for the taxis to be self-driving.

Uber is testing a program in London where it will rent or lease 50 electric cars to Uber drivers, [Tech Crunch](#) (Lunden, August 31, 2016). Uber will provide Chinese BYD E6s and Nissan Leaves to people who drive for Uber. It plans to expand to another British city next year.

There is a constant barrage of articles and opinion pieces in the media that claim to get people to drive electric, there needs to be a robust charging system. *Utility Dive* (Walton, August 31, 2016) says that the experience of two electric utilities, one here in Washington State, show that where the chargers are located may be just as important. Avista, which serves Eastern Washington, plans to build a charging network over two years. While rollout has been slow, the utility wants to use the process to understand electric car charging. Avista believes that chargers need to be placed according to amenities drivers might use. Level 2 chargers should be placed where drivers will spend hours out of their vehicles, while fast chargers can be placed near coffee shops, where drivers don't spend as much time. On the other hand, cost of installing chargers at otherwise desirable locations can be cost prohibitive.

Charging for car charging is on hold in Ireland because people aren't buying electric cars on the Emerald Isle, the *Independent* (Cunningham, August 31, 2016) indicates. During its pilot programme, Ireland's Electric Supply Board gave away chargers to electric car buyers and did not charge them for the electricity. The plan called for eventually charging €16.99 (\$19.02) per month to charge at low-speed chargers and €0.30 (\$0.34) per minute at fast chargers. Because of low sales, the utility has decided that implementing the chargers could further damage electric car sales and will continue to offer the services for free.

Sometime in the near future, when you rock on down to Portland's Electric Avenue,¹ you might be able to check out a variety of electric cars at Drive Oregon's federally funded storefront operation, *Green Car Reports* (Voelcker, September 1, 2016) reports. Drive Oregon will set up a location on SW Salmon Street between 1st and 2nd Avenues. Visitors will get to look at and ride in a variety of electric cars and learn about charging equipment. The Drive Oregon store will be "brand neutral" and is intended to educate the public about cars. There may be long term rentals available. The funding lasts for three years. In addition to the storefront, the federal funds will allow Drive Oregon to conduct "pop-up" marketing of electric cars.

Dubai is testing an electric, driverless bus, *The Times of India* (PTI, September 2, 2016) indicates. The ten passenger bus is making a 700 metre (not even half a mile) test drive during September. The bus reaches a top speed of 40 kilometres per hour (25 mph).

Police in London's Wandsworth Borough are testing a BMW i3 electric car with the range extender, the *Daily Mail* (Best, September 5, 2016) mailed. The car will be tested on patrol duties. One of the advantages of the vehicle is that the car can creep up on suspects. We don't know if London's police really see that as an advantage, or if that came from the fertile mind of the *Daily Mail's* reporter. The car was loaned by BMW for the test. The Metropolitan Police's driving school will also test the vehicle for suitability.

Tesla can no longer sell its cars direct to the public in Missouri, *HybridCars* (Hall, September 6, 2016) reports. Tesla has stores in Kansas City and St. Louis, but the

¹ Eddy Grant, "Electric Avenue" on *Killer on the Rampage*, Portrait Records, Greenheart Music Ltd., 1982.

Missouri Automobile Dealers Association took the State to court, saying that when Missouri's Department of Revenue issued Tesla a license, it violated State law. The Tesla stores will remain, but prospective Tesla owners will have to make the purchase online. Tesla will appeal.

"Riding on the City of New Orleans:"² The City of New Orleans³ Council voted to encourage electric vehicles in the city to combat climate change, [WGNO](#) (September 8, 2016) broadcasted. To do this, the City has a host of plans including fast chargers on public property, buying electric vehicles for the City, and creating incentives for private businesses to install chargers.

You still have time to clear your calendar on September 18th to attend the 3rd annual National Drive Electric Week event at Steilacoom's Sunnyside Beach. It's from noon to 2 PM. Organizer Dick Muri (State Representative for the 28th District) tells us that twice as many people have signed up than attended last year's event. Mr. Muri also tells us that among the cars on display are a Mercedes-Benz B-Class electric car, a Chevy Spark (which is not sold in Washington), and 2001 Dodge Dakota truck that was converted to electric drive. For more information or to sign up, go to the [Drive Electric web site](#).

The Port of Houston and Texas A&M Transportation Institute have developed a cargo shuttle to move containers on a rail for five miles between port terminals, [Transport Topics](#) (Begley, September 12, 2016) transmits. The shuttle would move containers using an induction motor. The system can get top speeds of 70 mph, however, the system would probably operate at 30. Other ports in Texas are interested in developing similar systems.

Apple is abandoning the electric car it is not building by laying off personnel from the car division the company says does not exist, [The Telegraph](#) (McGoogan, September 12, 2016) sent. According to the report, when Bob Mansfield was appointed head of the car division, he decided against building an electric car and concentrate on self-driving car technology instead. Apple, theoretically, would partner with a carmaker to provide the self-driving tech in the other partner's car.

According to the headline in the [Deseret News](#)⁴, Salt Lake City, the University of Utah, and Utah Clean Energy are in a "joint partnership" (Lee, September 12, 2016) to increase electric car ownership. This brings the U Drive Electric program into its second year. In its first year, the program increased the number of electric car owners by 76. By offering up to 25% in discounts combined with Federal and State tax incentives, the three organizations hope to increase electric ownership more.

Keep reading. There's more.

² Steve Goodman, "City of New Orleans," on *Steve Goodman*, Buddah Records, 1971, © 1999 Jurisdad Music and Turnpike Tom Music.

³ Editor's former hometown, ca. 1978-1982. We can't remember when we first came to New Orleans, but we remember when we left.

⁴ Is there another kind of partnership?

ALTERNATIVE FUELS

The U. S. Army⁵ Tank Automotive Research, Development and Engineering Center (TARDEC) and General Motors (GM) are working together to test the feasibility of hydrogen fuel cells in military vehicles, the [Detroit Free Press](#) (Gardner, August 30, 2016) pressed. GM outfitted a Chevrolet Colorado with a hydrogen fuel cell that it will demonstrate in October in the Nation's Capital. The Army will test the vehicle in 2017. Hydrogen fuel cells offer a great many advantages to the military, the Army believes. Among them is quiet stealth operations and the ability to generate electricity in the field, again, quietly.

Nikola was supposed to introduce a natural gas-electric Class 8 heavy duty truck. [Green Car Reports](#) (Edelstein, August 31 2016) reports that was a ruse. The company's Nikola One will be a hydrogen fuel cell-powered vehicle. Nikola said that they kept the development secret because of supplier negotiations. The company will build its own hydrogen stations.

Many dairy farmers have a problem: what to do with cow manure. If your dairy farm is big enough, over 2,000 head of cattle, you can build a digester that will convert the methane from manure to natural gas. If you have a small farm, you might be able to send your stuff to a nearby commercial digester. [Hybrid Report](#) reader Bill Stallman sent in a link to a [PBS News Hour](#) video, [Turning Poop into Power, Not Pollution](#), that tells how Colorado dairy farmers are converting their manure to gas. The process is also used in at least one waste water treatment plant turning human manure to gas.

Pacific Ethanol received EPA permission to produce ethanol from corn fiber at a plant in Stockton, California, where it currently makes ethanol from corn starch and sugar, the [Sacramento Business Journal](#) (Anderson, September 13, 2016) said. The approval comes with a federal premium of \$1 to \$1.50 per gallon.

The Energy Observer, a catamaran, is being refitted with solar, wind, and hydrogen power to set sail in February for a round the world cruise, [The National](#) (Agence France-Press, September 13, 2016) notes. Electricity generated by solar and wind power will run the vessel's engines in good weather, while hydrogen will power the boat at night or in bad weather. The craft was originally built in 1994 for a round the world cruise under sail. When the Energy Observer makes this voyage, it will stop in 101 cities over six years. The same team that tackled the Solar Impulse solar airplane's round the world trip that ended this summer.

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: Washington State University⁶ installed two charging stations on the main campus in Pullman, [WSU News](#) (August 30, 2016) notes. The chargers are at

⁵ The Editor's former employer, 1982-1998.

⁶ The Editor is a proud Cougar Dad.

the Smith⁷ Center and Terrell Library parking garages. Two cars can charge at each station simultaneously. These are ChargePoint chargers.

Arizona Mills in Tempe opened a EVgo Freedom Station fast charger, the *East Valley Tribune* (Dziawura, August 31, 2016) boasts. With the installation of the fast charger, Arizona Mills now has two charging stations.

Commerce Bank in Saint Louis installed fast charging stations at 12 branch banks, the *St. Louis Post-Dispatch* (Thorsen, September 9, 2016) dispatched. The chargers were placed through a joint effort with Nissan. New Leaf owners can charge for free, while all other drivers must pay \$5.95 plus 20 cents per minute. Even though the chargers were funded by Nissan, the accompanying photo shows a Tesla superstation.

Canal Fulton, just south of Cleveland, has a new station in a public parking lot on High Street, *The Canton Repository* (Grazier, September 8, 2016) deposited. Charging is free for the next year.

In a press release that announced the purchase of six hybrid and electric vehicles, the City of Boise (*Idaho Statesman*) also stated that it was installing charging stations at eight locations around Boise. Stations are slated for the Wastewater Treatment Facility in West Boise, the 20 Mile South Farm, and at City Hall.

Hobart, Indiana, has a charging station outside City Hall, *The Times* of Northwest Indiana (Reilly, September 12, 2016) tells. The charger was funded by NIPSCO, the area electric utility.

Around the World: There are two new fast chargers at the Auckland Airport Shopping Centre in New Zealand, *Stuff* (Harrowell, September 1, 2016) says. The chargers, part of the Vector system, are part of the New Zealand government's plan to have 64,000 electric vehicles on the tiny island nation's roads by 2021.

Rotorua on New Zealand's North Island installed a fast charger in the central business district, the *Rotorua Daily Post* (Harris, September 5, 2016) posted. Charging is free until February 2017, then the price for a charge is 40 New Zealand cents (30¢ US) per minute or \$8 NZ (\$5.94 US) for 20 minutes.

Also from New Zealand, the Staglands wildlife refuge in the Hutt Valley near Upper Hutt⁸ installed a charging station, free for visitors, *The Dominion Post* (Stuff, September 6, 2016) posted. The charger makes it possible for electric car owners from Wellington to visit the refuge, charge up and make it back to Wellington.

Keep reading. There's more.

⁷ No known relation.

⁸ Presumably above Lower Hutt. We are reminded that P. G. Wodehouse once wrote, "if this is Upper Silesia, one has to wonder what Lower Silesia is like." But Dr. Wodehouse was on his way to a German POW camp when he wrote those words, so his opinion of Silesia, Upper and Lower, may have been clouded. We have to assume that Upper and Lower Hutt are charming places.

OTHER TECHNOLOGY

From out of the future: Canadian scientists at Dalhousie University in Nova Scotia have discovered a way to improve lithium-ion batteries. It seems that ethylene carbonate, used as an electrolyte in these batteries, also contribute to corrosion and short life span (Xia, Petibon, Xiong, Ma, & Dahn, October 1, 2016). The Canadians replaced ethylene carbonate with ethylmethyl carbonate and found these batteries performed better. Their work is described in the October issue of *Journal of Power Sources*, but it costs \$39.95 to get a copy.

Meanwhile, scientists at The Ohio State University, have overcome a barrier to battery charging speed by using pore-spanning polypyrrole doped with dodecylbenzenesulfonate (PPy(DBS)) membranes (Hery & Sundaresan, June 22, 2016). The study published in *Energy & Environmental Science* says the membrane speeds up charging speeds. Again, it will cost you to read the study.

From The Pennsylvania State University, we find that scientists there have developed a new electricity storage device⁹ that may be superior to current batteries, according to a study published in the *Proceedings of the National Academy of Sciences of the United States of America* (Li, Liu, Yang, et al., August 22, 2016). The new device will be lighter than current storage technology, while being able to operate longer and at higher temperatures. You can purchase the article for \$10.

Using a profusion of technologies, Volvo Trucks North America has developed a truck that exceeds the U. S. Department of Energy's freight efficiency goals by 38%, *Truckinginfo* (September 13, 2016) informs. The SuperTruck exceeded the base model 2009 Volvo VN by 88%, while EPA was merely asking for a 50% improvement. Fuel efficiency alone was improved by 70%. The SuperTruck gets 12 mpg compared to the VN's 7 mpg. How did Volvo achieve such impressive numbers, you ask? We answer: Aerodynamics played a role as did lightweight fairings. The rearview side mirrors are gone, replaced with cameras. An aluminum chassis reduced the weight of the tractor by 3,200 pounds (the weight of a car). The truck comes with software that optimizes speed and shifting. The engine is smaller and has improved fuel injection, cooling, and turbo-charging systems. It also recovers heat that normally goes out the exhaust and converts it into torque for the engine.

SUBSCRIBING TO *The Hybrid Report*. *The Hybrid Vehicle and Alternative Fuel Report* (ISSN: 1946-1011) is published in Olympia, Washington on or about the 15th and 30th of each month, except for those months we publish on a different date or not at all. **The Report** is available on the WSDOT website by clicking this [link](#). From there, you can download the current issue in a PDF, look at back issues, or subscribe to a notification service that lets you know when a fresh issue has been posted to the website. You may also click this [link](#) to subscribe or contact the editor at smithm@wsdot.wa.gov who can add you to the subscription list.

⁹ We are unsure if there is a difference between a storage device and a battery.

More fine print: *The Hybrid Vehicle and Alternative Fuel Report* (ISSN: 1946-1011) is not responsible for hyperlinks that do not work or are inactive. All links worked when created; however, many news outlets archive or move reports soon after publication, so it's not our problem that you can't get to the cited article so don't call or email to complain. It will be much like trying to teaching a pig to sing: it will waste your time and irritate the pig. The appearance of articles, products, opinions, humor (such as it is), and links in this summary does not constitute an endorsement of the same by the Washington State Department of Transportation (WSDOT), my wife, or my cat (especially not my cat, who has no sense of humor. She's a cat). Except as otherwise noted, WSDOT holds the copyright to *The Hybrid Report*. Photos and other artwork in *The Report* are included with express permission of the copyright holders of those works or the work is in the public domain. Further reproduction or distribution of copyrighted material is not authorized without permission of the original copyright holder. Merely acknowledging the source is not always sufficient and does not excuse reproducing copyrighted material without permission. It's not that hard to ask for and get permission. Use only as directed; batteries not included. In the interest of full disclosure, the editor of this summary drives a Lexus NX 300h hybrid, while Mrs. *Hybrid Report* Editor drives a Lexus HS 250h hybrid. We are not saying you should get either one, but they are very nice.

ARTICLES REFERENCED

- Agence France-Presse. 2016, September 13. 'Solar Impulse of the Seas' readies for round-the-world voyage. *The National*. Retrieved: <http://www.thenational.ae/world/europe/solar-impulse-of-the-seas-readies-for-round-the-world-voyage>
- Anderson, M. 2016, September 13. Feds approve high-value fuel from Pacific Ethanol's Stockton plant. *Sacramento Business Journal*. Retrieved: <http://www.bizjournals.com/sacramento/news/2016/09/13/feds-approve-highvalue-fuel-from-pacific-ethanols.html>
- Begley, D. 2016, September 9. Houston Port Shuttle Hailed as Potential Freight-Handling Breakthrough. *Transport Topics*. Retrieved: http://www.ttnews.com/articles/basetemplate.aspx?storyid=43146&utm_source=express&utm_medium=newsletter&utm_campaign=newsletter
- Best, S. 2016, September 5. Criminals beware: London's police are testing silent electric cars that can CREEP UP on suspects. *Daily Mail*. Retrieved: <http://www.dailymail.co.uk/sciencetech/article-3774520/Criminals-beware-London-s-police-testing-silent-electric-cars-CREEP-suspects.html>
- Bowden, K. 2016, September 7. New lab at UW to research clean, smart vehicles. *CTV Kitchener*. Retrieved: <http://kitchener.ctvnews.ca/new-lab-at-uw-to-research-clean-smart-vehicles-1.3062929>
- Cobb, J. 2016, September 2. *August 2016 Dashboard*. HybridCars. Retrieved: <http://www.hybridcars.com/august-2016-dashboard/>
- Cunningham, E. 2016, August 31. Charging 'on hold' as electric vehicle sales slide. *Independent*. Retrieved: <http://www.independent.ie/life/motoring/charging-on-hold-as-electric-vehicle-sales-slide-35007668.html>
- Edelstein, S. 2016, August 31. Nikola unveils how its electric truck works: custom hydrogen fuel cell. *Green Car Reports*. Retrieved: http://www.greencarreports.com/news/1105873_nikola-unveils-how-its-electric-truck-works-custom-hydrogen-fuel-cell

- Fair, J. 2016, September 5. Upgrade Athens County offers interest free loans for energy efficient vehicles. *The (Athens) Post*. Retrieved: <http://www.thepostathens.com/article/2016/09/upgrade-athens-county-promotes-energy-efficient-car-loans>
- Gardner, G. 2016, August 30. Could the next tanks have fuel-cell technology from a Chevy truck? *Detroit Free Press*. Retrieved: <http://www.freep.com/story/money/cars/2016/08/30/gm-tardec-test-fuel-cell-chevy-colorado/89556486/>
- Grazier, S. M. 2016, September 8. Electric vehicles can get a charge in Canal Fulton. *The Canton Repository*. Retrieved: <http://www.cantonrep.com/news/20160908/electric-vehicles-can-get-charge-in-canal-fulton>
- Gulf News*. 2016, September 4. Dubai Police to use new hybrid cars. Retrieved: <http://gulfnews.com/news/uae/transport/dubai-police-to-use-new-hybrid-cars-1.1890574>
- Hall, L. E. 2016, September 6. Tesla Loses Missouri Dealership Case. *HybridCars*. Retrieved: <http://www.hybridcars.com/tesla-loses-missouri-dealership-case/>
- Harris, G. 2016, September 5. Electric charging station a first of its kind. *Rotorua Daily Post*. Retrieved: http://www.nzherald.co.nz/rotorua-daily-post/news/article.cfm?c_id=1503438&objectid=11703613
- Harris, M. 2016, August 24. Self-driving taxis roll out in Singapore-beating Uber to it. *The Guardian*. Retrieved: <https://www.theguardian.com/technology/2016/aug/24/self-driving-taxis-roll-out-in-singapore-beating-uber-to-it>
- Harrowell, C. 2016, September 1. Two rapid electric vehicle chargers unveiled at Auckland Airport. *Stuff*. Retrieved: <http://www.stuff.co.nz/motoring/83709376/two-rapid-electric-vehicle-chargers-unveiled-at-auckland-airport>
- Hery, T. & Sundaresan, V-B. Ionic redox transistor from pore-spanning PPy(DBS) membranes. *Energy & Environmental Science*, Issue 8. Retrieved: <http://pubs.rsc.org/en/content/articlelanding/2016/ee/c6ee01448h#!divAbstract>
- Idaho Statesman*. 2016, September 9. Boise fleet to add electric, hybrid vehicles. Retrieved: <http://www.idahostatesman.com/news/local/community/boise/article100920377.html>
- Lee, J. 2016, September 12. Joint partnership promotes expanded use of electric vehicles. *Deseret News*. Retrieved: <http://www.deseretnews.com/article/865662284/Joint-partnership-promotes-expanded-use-of-electric-vehicles.html?pg=all>
- Li, Q.; Liu, F.; Yang, T.; Gadinski, M. R.; Zhang, G.; Chen, L-Q.; & Wang, Q. 2016, August 22. Sandwich-structured polymer nanocomposites with high energy density and great and charge-discharge efficiency at elevated temperatures. *Proceedings of the National Academy of Sciences of the United States of*

WGNO. 2016, September 8. The New Orleans City Council passes motion encouraging the use of electric vehicles. Retrieved: <http://wgno.com/2016/09/08/the-new-orleans-city-council-passes-motion-encouraging-the-use-of-electric-vehicles/>

WSU News. 2016, August 30. Electric vehicle charging stations on WSU Pullman campus. Retrieved: <https://news.wsu.edu/2016/08/30/electric-vehicle-charging-stations-now-wsu-pullman-campus/>

Xia, J.; Petibon, R.; Xiong, D.; Ma, L.; & Dahn, J. R. 2016, October 1. Enabling linear alkyl carbonate electrolytes for high voltage Li-ion cells. *Journal of Power Sources*, Vol. 328, pp. 124-135. Retrieved: <http://www.sciencedirect.com/science/article/pii/S037877531631014X>

That'll do.