Time Marches On: Happy Birthday to us! We’ve done it again: made it through another year. Twelve of them, in fact. The first issue of The Report appeared in electronic inboxes the first day of April in 2005 under the title The Hybrid, Fuel, and Vehicle Report. Originally a monthly publication, we added an edition on the 15th of each month and slowly moved the publication date of the other edition to the 30th of the month, so we used to celebrate March 30th as our birthday. That way, when April 1st rolled around, readers would not mistake the Anniversary Edition for an April Fools’ joke. We could have just as easily celebrated on the 15th of April, but this way we would get our presents, cards, and cake two weeks earlier. However, this year, we are returning to the original date of celebration, in honor of our last edition as editor and our impending retirement, just over a month away. From a subscriber list of just eight coworkers, The Hybrid Report now goes to around 860 people (that we know about) around the world. Out of that number, our friends at the microwave surveillance section of the National Security Agency tell us that about 20% of our subscribers actually open our emails and click on the links to The Report. A number of our subscribers also forward The Report to their friends and coworkers or post The Report on their websites and social media pages. Our subscription list includes readers from other Washington State agencies; other state DOTs; local and federal government agencies; educational institutions around the country; several news organizations; environmental and consulting organizations; and members of the public. We are also listed in the International Serials Data System Register (the ISSN in the upper right hand corner) and at least three automakers, PRNewswire, and a British news service list us as “accredited media.” So, coming to you from our office suite high atop the Washington State Department of Transportation Headquarters Building in Olympia, Washington, it’s time for the Twelfth Anniversary Edition of The Hybrid Vehicle and Alternative Fuel Report.

1 We assume there is a delay at the Post Office because we haven’t received any, yet.
2 This is not entirely a joke. We spent our last two years in the US Army assigned to a Military Intelligence Brigade. Then there was that year in . . . never mind.
3 The Oak Ridge National Laboratory does not consider us accredited media. We don’t hold grudges.
HYBRIDS

The new Hyundai Ioniq could be the most efficient hybrid on the market, Torque News (Ashton, March 14, 2017) notes. The Ioniq, which is about $2,000 less than the Prius, gets 58 mpg, while the Prius gets 52 mpg. The Ioniq also has the highest thermal efficiency at 40%, according to Torque News. According to a May 2015 GAS2 (Hanley, May 27, 2015), the 2016 Prius also gets 40%. We have no idea what that means.4

According to Construction Week Online (Bambridge, March 26, 2017), Toyota has sold 10.05 million hybrid cars which accounts for a savings of 77 million tons of carbon dioxide emissions and a reduction of 29 million kilolitres (7.7 billion gallons) of fuel. That’s enough fuel to travel 1.5 million times to the moon.5

ELECTRIC VEHICLES

WAVE, a company from Utah, successfully demonstrated a wireless vehicle charging system and will deliver the chargers to Antelope Valley Transit Authority in California, the company (February 22, 2017) said in a press release. The charging system will allow Antelope Valley’s buses to top off charges while loading and dropping off passengers.

The United Kingdom’s Royal Navy acquired 48 Nissan e-NV200 electric vans for support work at the Portsmouth Naval Base, HybridCars (LeSage, March 14, 2017) comments. The Ministry of Defense is working on a base modernization plan that includes converting about one-third of the Base’s vehicle fleet to electric.

An Australian company is developing an electric motor for aviation, The Sydney Morning Herald (Tasker, March 13, 2017) heralded. The company, magniX, from Queensland, is working on a prototype to test in a few weeks and will go into light aircraft in a few years. Airlines spend about $200 billion for fuel, and it is believed that electric aircraft could halve the bill. Vernon Mitchell of the office formerly known as the TDO provided this article.

Governor Cuomo of New York officially announced a $70 million electric car promotional program, the New York State Energy Research and Development Authority (March 21, 2017) authorized. The program has set aside $55 million so that eligible car buyers of plug-in hybrids, electric, or fuel cell vehicles can get $2,000 rebates. Another $15 million will support outreach programs including installing charging stations. But before you rush out to buy an electric car in New York, Green Car Reports (Voelcker, March 25, 2017) reports that the rebate varies based on mileage and price. To get the full rebate of $2,000, your new electric car has to get more than 120 miles in electric-only mode AND cost less than $60,000. Cars that cost less than $60,000 and get 40 to 119

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4 We looked it up. It is the amount of useful work an internal combustion engine can perform from the total of heat energy used in the process. So in the case of the Ioniq, 40% of the energy performs work, while 60% is waste energy. We’ve never seen this statistic used in any car review or statistic before. It sounds a lot like physics.

5 This would have been a perfect place for a Honeymooners reference, but we were never a fan.
miles are eligible for a rebate of $1,700. Cars that cost less than $60,000 and get 20 to 39 miles get a rebate of $1,000. If your car gets less than 20 miles or costs more than $60,000, you only get $500.

MAN, a German manufacturer of commercial trucks and buses, and Austria’s Council for Sustainable Logistics (CNL) have reached agreement to build and test urban delivery electric trucks, MAN (February 20, 2017) said in a press release. MAN will build electric trucks and provide them to nine of the 15 companies that make up CNL for testing.

National Drive Electric Week is scheduled for September 9-17, but it’s not too early to get it on your calendar. Locally, the closest event for the week is at Steilacoom, Washington, on Saturday, September 9, 2017 from 11 AM to 2 PM. City Captain and organizer Dick Muri tells us that the event has moved to a nicer downtown Steilacoom location at 1700 Lafayette Street. In addition to the ability to look at and test drive vehicles, there are restaurants and coffee shops in the vicinity. There will also be vendor booths. You can sign up at https://driveelectricweek.org/event.php?eventid=907.

WallyPark at the Los Angeles International Airport operates an all-electric shuttle bus fleet between their parking lots and the airport, Clean Technica (Shahan, March 26, 2017) says. Phoenix Motorcars provided 16 Zero Emissions Utility Shuttles (ZEUS) to L&R Group, which owns WallyPark. The company plans to expand to other parking facilities around the country, although, we don’t know if the WallyPark locations at SEATAC airport will get ZEUS. The ZEUS buses are supposed to reduce greenhouse gasses by 60 tons of carbon dioxide per year.

Automotive News (Walsworth, March 28, 2017) published some “spy photos” of the new version of the Nissan Leaf that is in testing. Don’t get too excited. While the photos are pretty clear and you can get a good idea of the silhouette, the car is wrapped in black plastic. Among some of the changes Automotive News notes are that the new Leaf will have the same V-motion grille that other Nissans have, rather than front-end of the original Leaf. The taillights on the new Leaf are lower on the car and have changed from the original. Automotive News said the side profile and rear hatch are about the same. Inside the car, Nissan says the car will have a 200-mile range. Nissan will unveil the car this year and put it on sale next year.

ALTERNATIVE FUELS

Public-sector subscribers in Washington State may be interested in the resources and links provided by the interagency Alternative Fuels & Vehicles Technical Advisory Group (AFV-TAG). AFV-TAG is supported by the Washington Department of Commerce’s State Energy Office, which has responsibility for developing and guiding implementation of alternative fuel and vehicle procurement rules for agencies, universities, and local governments (including cities, counties, ports, transit, school, and public utility districts). Commerce maintains an AFV-TAG listserv that distributes materials on a monthly basis and hosts half-day meetings every other month on a range of topics, including joint procurement opportunities, fleet management strategies, and
technological advances. If you're interested in receiving regular updates and joining the discussion, drop a note to Peter Moulton at peter.moulton@commerce.wa.gov.

The *Detroit Free Press* (Phelan, March 25, 2017) reviews the hydrogen version of the Honda Clarity, which is on sale in California. The sale price is $58,490 but buyers get a $15,000 fuel allowance and 21 days' allowance towards a rental of a regular car when the owner wants to go somewhere hydrogen is not available. Honda will introduce an electric version that gets 80 miles on a charge and a plug-in version that gets 40 miles on a charge at the New York Auto show this month.

**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:** VW has released its California plan to spend the money as part of the court settlement with the California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (EPA) over VW’s falsifying diesel emissions tests, *electrek* (Lambert, March 15, 2017) elicits. VW will install 2000 to 3000 chargers at 400 stations around the state, starting in the largest metropolitan areas in the state.

Another electric highway is in the works, this one along Interstate 94 from Port Huron, Michigan, to Billings, Montana, the *Wisconsin State Journal* (Avila, March 19, 2017) journals. The new route, called the M2M (Michigan to Montana) Corridor was financed through a Department of Energy grant of $4.9 million. While the corridor is just in the planning stages, the Gas Technology Institute, heading up the project, expects to have charging stations and other alternative fuel stations operational beginning 2019.

“I had to get some groceries. I felt a little faint.” While Nicely Nicely Johnson, in *Guys and Dolls*, would visit the grocery store whenever he felt a little faint, more and more, people are going to other outlets like farmers markets, convenience stores, or specialty markets. *ChargePoint* (March 17, 2017) is selling charging stations as a way grocers can get more people into their stores and keep them there. ChargePoint says that grocery chains like Harris Teeter and Fred Meyer have installed chargers at 2000 locations in 45 states.

**Around the World:** The Mid Devon District Council, which, we assume, is in the middle of Devon in England, will install eight fast chargers in three towns in the District, *Renewable Energy Magazine* (Whitlock, March 14, 2017) mentions. Users of the charging stations don’t have to be a member of any service to use them. The charging stations will be listed on zap-map.com.

The Dubai Electricity and Water Authority (DEWA) will install 100 charging stations around the Emirate of Dubai, *The Gulf Today* (March 17, 2017) says. The new stations, the second phase of the Green Charger plan, will bring the number of DEWA’s chargers to 200.

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6 Jo Swerling, Abe Burrows (Book), and Frank Loesser (Music and Lyrics), *Guys and Dolls*, 1950.
Austria is the latest country to build a national charging network, Reuters (Knolle, March 20, 2017) reports. Austria is taking a slightly different approach by uniting systems operated by 11 different organizations in a single system. Users can sign up with just one of the providers and use all the chargers in the system.

There are a total of 7,407 charging stations in Germany, an increase of 27% over last year, Reuters (Eckert, March 24, 2017) reports. Of the new stations, 292 are fast charging stations. Electric cars have grown in Germany at about the same rate as charging stations. There are 77,000 electric cars in Germany, a 29% increase over the previous year.

OTHER TECHNOLOGY

A drawback to your typical solar panel is that they only turn 32% of the solar energy they capture into electricity. MIT scientists have built a device that may be able to convert twice that and it comes in a smaller package, MIT's Technology Review (March 8, 2017) reviews. While the new solar device is more efficient, there are drawbacks: components are more expensive and the device only works in a vacuum. Doug McClanahan provided us with this piece of information.

“The Last Farewell:”7 It was Geoffrey Chaucer who said all good things must come to an end.8 This is the case with my association with The Hybrid Report. This is the last edition of The Hybrid Report I will edit. I’m done. Finished. Kaput. After over 40 years of government service, the last 18 with Washington State Department of Transportation, I’m riding off into the sunset and hanging up my spurs on May 4th. This announcement shouldn’t come as a surprise, since we reported back in February that the transition was coming, but the fateful day has finally arrived. Yes, Ms. Hybrid Report Editor finally gave in and said I could hang around the house all day. She plans to continue working rather than hang around the house with me.9 You may ask what am I planning to do next? I have a few volunteer activities lined up, which may or may not include local musical theater. I have a couple of independent research projects involving the arts and leadership to work on. Travel is a possibility. Even after traveling to all fifty states and all seven continents there are still a whole lot of places left to see and quite a few I need to go back to. Savannah and Tybee Island, Georgia, beckon. And I understand Maui is nice. I hope you’ve enjoyed reading The Report as much as I have enjoyed writing it.

The good news is that The Report will continue. I’ll be turning over the editorial duties of The Hybrid Report and we’ve found a new home for it in Washington State Department of Transportation’s Research and Library Services under the editorship of Michel Wendt. The Report will have a different writer and editor and it may evolve or change, but it will still be around to keep you informed about developments in the world of hybrid cars and other alternative vehicles and fuels. If you want to keep receiving The Report, you don’t

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8 Geoffrey Chaucer, “Troilus and Crisyde,” ca 1384. There is some debate among experts as to whether Geoff said “all things must end” or “all good things must come to an end.” It may very well be that he said, “That's all folks.”
9 I don’t get it either.
need to do anything. We will transfer our mailing list to the new editor. If you don’t want to continue receiving The Report, send me an email at smithtm@wsdot.wa.gov by April 15, and you will be removed from the list. Because of the transition from one office to the other, the new editor will not release the next Hybrid Report until April 30.

That’ll do.

ARTICLES REFERENCED


