



Green Auto Market

The Business of Green Cars, Fuels & Technologies

Jon LeSage, editor and publisher

October 2016 – Extended Edition – Part Two

Why utility vehicles will play an increasingly important role in the future of plug-in vehicles



If you were to study U.S. new vehicle sales data and compare it to Plug In America's plug-in vehicles directory, you'd see something that the two sources have in common: popularity of utility vehicles. By utility vehicles, I would include SUVs, crossovers, vans, and hatchbacks. If you take a close look at new vehicle sales in the U.S. and upcoming vehicle launches announced by automakers at the Paris Motor Show, you can get a look at the increasingly important role these vehicle categories will be playing.

“Crossovers and vehicle electrification are again expected to be key reveals at the event,” said Ian Fletcher, the principal analyst for IHS Markit, at the Paris Motor Show. “The key trends are being determined by a combination of consumer demand – in terms of the number of crossovers being revealed – and legislative emissions factors, through a focus on electrification.”

Plug In America lists 27 all-electric and plug-in hybrid 2017 model year passenger vehicles available in the U.S. market on its website, and of those I would break out 12 of them being utility vehicles. For September 2016 new vehicle sales in the U.S., the largest sales category, by far, was crossovers. Combined, crossovers and SUVs made up 555,497 of the 1.4 million units sold in the U.S. during September, according to Autodata Corp. Midsize and small cars continued to be sizable categories, but overall, light-duty truck segments continue to outsell cars in the U.S. as gasoline prices stay down and the popularity of utility vehicles increases.

Americans have become more interested in buying utility vehicles over the past decade, especially crossover utility vehicles. For crossovers and SUVs, top selling models in the U.S. lately have included the Toyota RAV4 (see photo above), Honda CR-V, Ford Escape, Nissan Rogue, Ford Explorer, Chevrolet Equinox, Jeep Cherokee and Grand Cherokee, Toyota Highlander, and Subaru Forester and Outback. There are no plug-in versions of these vehicles on the market in the U.S. The Toyota RAV4 EV was pulled from the market about two years ago, while a hybrid version of the RAV4 came to market earlier this year. Toyota also offers the Highlander Hybrid.

The Toyota Prius is credited for popularizing hatchbacks, with owners appreciating the ability to lift the back door, fold down seats and gain the ability to move boxes, surfboards, grocery bags, camping gear, etc. The Nissan Leaf tapped into that accessibility along with the Tesla Model S and Ford C-Max Hybrid and Plug-in Hybrid. Car shoppers could add these practical functions to its list along with being environmentally friendly. Subaru has used the utility functionality in its TV ad campaigns, with a family loading up gear and heading for the mountains.

Auto analysts had predicted growing popularity in utility vehicle sales for a few reasons – transporting gear like bicycles and home repair materials, families carrying more passengers, functionality for projects like moving to a new home, and the growing popularity that SUVs were having over vans and large sedans. Making them more fuel efficient helped, too, long before gas prices plunged downward. Consumers also give kudos to all of the utility vehicles, including pickups, becoming much smoother to ride in and more like cars in their seating comfort and dashboard displays.

Here's a roundup of new vehicle launches at the Paris Motor Show and other electric vehicles in the pipeline tapping into the interest in, and functionality of, utility vehicles:

Chevy Bolt: General Motors classifies its upcoming all-electric vehicle as a crossover SUV. It's been getting as much attention lately as the Nissan Leaf and Chevy Volt did during their late 2010 launches. While the range of 238 miles per charge, and its price-competitive position against the upcoming Tesla Model 3, are seen as key selling points, GM decided to invest more in a crossover SUV; as opposed to a small car like the Chevy Spark EV, which never did well in sales. The Chevrolet Sonic may have been more of a useful platform to model for the Bolt. The EPA is rating the Sonic and the Bolt as small wagons, though GM considers them differently. For some reason, the EPA has yet to adopt the crossover category.



Generation EQ: Daimler previewed its new EQ electric car brand through launching the Generation EQ concept in Paris. The EQ brand unveiling is the first step in launching 10 new battery-electric models by 2025 in Daimler's strategy to become the global leader in electric vehicle technology; it appears to serve as a sub-brand of Daimler's Mercedes-Benz division. Daimler said that the Generation EQ electric crossover will have a range up to 500 kilometers (311 miles), which is probably based on Europe's NEDC standards; that will be lower in U.S. mileage range under EPA measures. The concept car is being moving closer to production, and is being built on an architecture developed specifically for all-electric models. That architecture is adaptable for crossovers, SUVs, sedans, coupes, and other model series, the company said.



Volkswagen I.D.: Volkswagen's chairman, Herbert Diess, was on the stage to unveil the new crossover concept, called I.D., at the show. It will be the first new model built on the automaker's MEB modular electric platform. Its battery in-flat-floor architecture is built within a futuristic exterior design with a glass roof, artistic wheel covers, digital headlamps, and sliding rear doors. It's expected to hit production level in 2019 for purchase starting in 2020. It's part of the automaker's Strategy 25, where the company will be building up to one million EVs by the middle of the next decade. Last week, the automaker announced it will be expanding sales of its e-Golf nationwide in the U.S., beyond a few select states. However, VW also revealed in Paris that the I.D. will eventually replace the e-Golf (but not the



Golf). Several of VW's concept vehicles in recent years have been rolled out on SUV and crossover platforms, including the Budd-E concept.

Mitsubishi GT-PHEV concept: Mitsubishi unveiled the GT-PHEV SUV, which has been designed around the automaker's next-generation plug-in hybrid system. The system uses three electric motors and an internal combustion engine designed specifically for hybrid applications. Mitsubishi's Executive Vice President of Overseas Operations, Kozo Shiraji, introduced the GT-PHEV concept (which stands for Ground Tourer Plug-In Hybrid Electric Vehicle) as the "possible form for a future large SUV." The company said that the driving range for its next plug-in vehicle promises to expand on the current Mitsubishi Outlander PHEV's range. The Outlander PHEV is a strong selling plug-in vehicle in the European market.



Chrysler Pacifica: Fiat Chrysler Automobiles is finally entering the plug-in space. According to a new report, Fiat Chrysler engineers are putting the Chrysler Pacifica plug-in hybrid through final testing and calibration checks on the streets of metro Detroit ahead of the start of production, which is scheduled for next month. It looks just like the gasoline-powered version, except for special badges and a battery charging port on the left front fender.

BMW X3: BMW i3 electric utility vehicle sales have been disappointing for the automaker. Luxury vehicle owners will buy gasoline-engine CUV and SUV versions from BMW and competitors, but this so far the i3 hasn't clicked. It has gone over well with a few EV advocates and sales have been okay. For now, BMW seems to be counting on a plug-in hybrid variant of the X3. The next-generation X3 is on its way and BMW wants to create a hybrid version as the company sees it as a more mainstream offering to the consumer. While current BMW plug-in hybrid cars (BMW X5 xDrive40e and 740e) are pricey, the X3 would give buyers another mainstream offering next to the BMW 330e, according to BMW Blog.



Range Rover and Land Rover: Jaguar Land Rover is working on two new plug-in hybrid models through its Range Rover and Land Rover brands. The company is first developing a new plug-in hybrid powertrain set to be offered on the Range Rover Sport. It will be based around the firm's four-cylinder Ingenium gasoline engine, mated to the engine with an electric designed to work with the company's existing eight-speed automatic transmission. For the second hybrid system being developed, it will be designed for the Range Rover Evoque and Land Rover Discovery Sport. It'll utilize a three-cylinder diesel engine with an electric turbocharger and a small electric motor. Additionally, a 48-volt electrical system will provide power to the water pump and air conditioner. These models aren't expected to debut until the end of 2018.





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Hybrid Electric Vehicle Sales: September 2016 – Top 10 and US Market Total

Make	Model	September 2016	Vs. August 2016	Vs. September 2015	CY 2016	US Hybrid Share
Toyota	Prius Liftback	9,790	--3.8%	--1.6%	78,372	31.29%
Toyota	RAV4	4,127	--16.1%	NA	32,989	13.19%
Ford	Fusion Hybrid	3,776	25.8%	88.6%	21,784	12.07%
Toyota	Camry Hybrid	1,902	--11.7%	--27.7%	16,551	6.08%
Hyundai	Sonata	1,815	58.4%	53.2%	14,241	5.80%
Toyota	Prius C	1,459	0.0%	--56.7%	15,893	4.66%
Toyota	Prius V	1,222	--9.2%	--52.5%	11,241	3.91%
Honda	Accord Hybrid	1,160	30.3%	35.8%	2,880	3.71%
Ford	C-Max Hybrid	739	--15.9%	--40.7%	9,773	2.36%
Toyota	Avalon Hybrid	688	--11.2%	--35.3%	6,113	2.20%
	Total Hybrid Sales	31,286	--2.9%	--2.6%	257,496	2.19%
	Total Auto Sales	1,427,812	--5.2%	--0.7%	13,044,080	

Sources for Hybrid and EV Sales Figures: HybridCars.com and Baum & Associates

Plug-In Electric Vehicle Sales: September 2016 – Top 10 and US Market Total

Make	Model	September 2016	Vs. August 2016	Vs. September 2015	CY 2016	US Plug-In Share
Tesla	Model S	4,100*	28.1%	95.2%	21,400	25.5%
Tesla	Model X	2,600*	36.8%	43233.3%	12,900	16.18%
Chevrolet	Volt	2,031	--2.4%	114.0%	16,326	12.51%
Ford	Fusion Energi	1,652	16.2%	104.5%	11,650	10.28%
Nissan	Leaf	1,316	23.5%	5.5%	9,238	8.19%
Ford	C-Max Energi	689	--2.5%	--4.2%	5,376	4.28%
Volkswagen	e-Golf	529	16.5%	54.2	2,782	3.29%
BMW	X5	482	--45.0%	NA	4,584	2.99%
BMW	i3	391**	--61.4%	--77.1%	5,763	2.43%
Fiat	500e	370	19.0%	3.6%	2,938	2.3%
	Total Plug-In Sales	16,069	7.3%	78.3%	109,513	0.76%
	Total Auto Sales	1,427,812	--5.2%	--0.7%	13,044,080	

* Estimates

** Breakdown between battery electric and plug-in hybrid sales is not available

Sources for Hybrid and EV Sales Figures: HybridCars.com and Baum & Associates