

After years of promise, battery cars about to go mainstream

March 5 2019, by David Mchugh



The new Honda 'E' concept car is veiled with a red dustsheet during the press day at the '89th Geneva International Motor Show' in Geneva, Switzerland, Tuesday, March 05, 2019. The 'Geneva International Motor Show' takes place in Switzerland from March 7 until March 17, 2019. Automakers are rolling out new electric and hybrid models at the show as they get ready to meet tougher emissions requirements in Europe - while not forgetting the profitable and popular SUVs and SUV-like crossovers. (Cyril Zingaro/Keystone via AP)

For years, there have been lots of electric cars proudly rolled out at auto

shows but few on the streets or at dealers. That could be about to change.

The electric cars under the lights at the Geneva International Motor Show promise to be the leading edge of more affordable, longer-range vehicles that start to move battery cars out of their niche—as a product for environmentalists willing to put up with limited range and wealthy enthusiasts of new technology willing to pay for buzz and the robust but silent acceleration the cars offer.

Several broad underlying trends are converging to increase the likelihood that larger numbers of battery cars will be on the roads in the next several years.

Prices are falling for batteries, consumers are turning away from diesel engines after Volkswagen's emissions scandal, and governments in Europe and China are enforcing tougher emissions rules.

As more electric cars roll off assembly lines, the trick will be getting more people to buy them. A key factor will be price—of the battery to the manufacturer, and consequently of the car to the customer.

Volvo Car Group's Polestar 2 and Peugeot's new electric 208 compact are electric offerings aimed at bringing battery-powered cars within reach of more people. The Polestar 2 launch version, expected in 2020, starts at \$55,500 after the \$7,500 U.S. tax incentive; the Europe price starts at 59,000 euros. A less expensive model is envisioned after the first year. Polestar says the model is aimed at the same potential customers as the Model 3 electric compact from California carmaker Tesla.



A detail picture of the new Kia 'Imagin' concept car during the press day at the '89th Geneva International Motor Show' in Geneva, Switzerland, Tuesday, March 05, 2019. The 'Geneva International Motor Show' takes place in Switzerland from March 7 until March 17, 2019. Automakers are rolling out new electric and hybrid models at the show as they get ready to meet tougher emissions requirements in Europe - while not forgetting the profitable and popular SUVs and SUV-like crossovers. (Cyril Zingaro/Keystone via AP)

Tesla said last week it will close many of its stores and move to online sales only so it can cut costs and reach its goal of selling the Model 3 for \$35,000. Before the announcement the lowest price was \$42,900.

Polestar CEO Thomas Ingenlath says the takeoff for e-cars "is something that's pretty close."

"You need a decent offer of a premium electric car that makes it accessible," he said. "There are a lot of brands pitching into the region

above 80,000 euros (\$90,600), so the offer there is getting broader, but below, in the area between 40,000 and 60,000 euros, it's still relatively limited and I think Polestar coming in there will help accelerate things."

And then there's Volkswagen. The world's largest car maker, which sold 10.83 million cars last year across 12 brands including Audi and Porsche, is refitting its plant in Zwickau, Germany, to produce electric vehicles, the first of eight battery vehicle plants worldwide. Zwickau is to produce 100,000 ID model vehicles next year on what the company says will be a carbon-neutral basis, boosting Volkswagen's output of electric earlier models to 150,000. Overall, the division aims to sell a million electric cars a year, or about a fifth of the Volkswagen brand's sales, by 2025.



The new 'Polestar 2' is presented during the press day at the '89th Geneva International Motor Show' in Geneva, Switzerland, Tuesday, March 05, 2019. The 'Geneva International Motor Show' takes place in Switzerland from March 7

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"We want to bring electrification to a breakthrough," the Volkswagen brand's chief operating officer, Ralf Brandstaeetter, told The Associated Press.

He said the company can do that through efficient, large-scale production. The ID compact heads into production in November and should go on sale in spring 2020, with a base model available for under 30,000 euros (\$34,000).

The company is spending 11 billion euros on new technology through 2023, the bulk of that on developing electric cars.

"This is Volkswagen's typical DNA," Brandstaeetter said. "Making cars for millions, not e-mobility for millionaires."



The new Sin Cars 'L City' electric car is presented during the press day at the '89th Geneva International Motor Show' in Geneva, Switzerland, Tuesday, March 05, 2019. The 'Geneva International Motor Show' takes place in Switzerland from March 7 until March 17, 2019. Automakers are rolling out new electric and hybrid models at the show as they get ready to meet tougher emissions requirements in Europe - while not forgetting the profitable and popular SUVs and SUV-like crossovers. (Cyril Zingaro/Keystone via AP)

According to Mark C. Newman, managing director and senior analyst at research firm Bernstein, falling battery prices are bringing the day closer when electric cars become as cheap as gasoline and diesel models.

The estimate for 2018 battery pack prices is below \$130 per kilowatt hour for the most efficient manufacturers. That is down from \$1,000 per kilowatt hour in 2010, and closing in on the \$120 per kwh level that the International Energy Agency estimates will make a compact battery car cheaper to own and operate than its internal combustion cousins at

Europe's high gasoline prices.

Bernstein foresees cost parity by 2022-23 and estimates that global market share of battery and hybrid cars will rise to between 9.6 percent and 17.7 percent by 2025. Last year it was 2.1 percent.

Regulation is playing a key role.



The new e.GO 'Lux' is presented during the press day at the '89th Geneva International Motor Show' in Geneva, Switzerland, Tuesday, March 05, 2019. The 'Geneva International Motor Show' takes place in Switzerland from March 7 until March 17, 2019. Automakers are rolling out new electric and hybrid models at the show as they get ready to meet tougher emissions requirements in Europe - while not forgetting the profitable and popular SUVs and SUV-like crossovers. (Martial Trezzini/Keystone via AP)

European carmakers will need a growing share of zero local emission vehicles to meeting European Union requirements for lower emissions of carbon dioxide by 2021, and even lower emissions thresholds in 2025 and 2030. If they don't, they could pay thousands of euros in fines per vehicle. China is requiring carmakers to increase the share of alternative energy vehicles through a points system that gives more credit to low-emission, longer-range electric vehicles.

Things may change more slowly in the United States, where the administration of U.S. President Donald Trump is moving to ease higher mileage requirements from the Obama administration. Still, California is pushing for more battery-powered vehicles and hybrids, which use both batteries and internal combustion engines. It says 8 percent of new car sales could be electrics, hybrids or other low emission vehicles by 2025.



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An example of how regulation can promote electrics is Norway, where a raft of incentives has pushed the market share of plug-in vehicles to 39 percent last year. By contrast, China was at 4 percent, Germany at 1.8 percent and the U.S. at 2.1 percent.

Gil Tal, director of the Plug-in Hybrid & Electric Vehicle Research Center at the University of California-Davis, says "you will see larger numbers three years from now," largely driven by subsidies and incentives at the outset.



The new e.GO 'Life Sport' is presented during the press day at the '89th Geneva International Motor Show' in Geneva, Switzerland, Tuesday, March 05, 2019. The 'Geneva International Motor Show' takes place in Switzerland from March 7 until March 17, 2019. Automakers are rolling out new electric and hybrid models at the show as they get ready to meet tougher emissions requirements in Europe - while not forgetting the profitable and popular SUVs and SUV-like crossovers. (Martial Trezzini/Keystone via AP)

"There's a huge gap between the number of electric cars you see at an auto show and how many cars the dealer will offer you," he said. "It's kind of hard to ask the market for huge demand when there is no supply."

"You need to stock the shelves first."



Visitors look at the 'Piech Mark Zero' electric car during the press day at the

'89th Geneva International Motor Show' in Geneva, Switzerland, Tuesday, March 05, 2019. The 'Geneva International Motor Show' takes place in Switzerland from March 7 until March 17, 2019. Automakers are rolling out new electric and hybrid models at the show as they get ready to meet tougher emissions requirements in Europe - while not forgetting the profitable and popular SUVs and SUV-like crossovers. (Martial Trezzini/Keystone via AP)

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