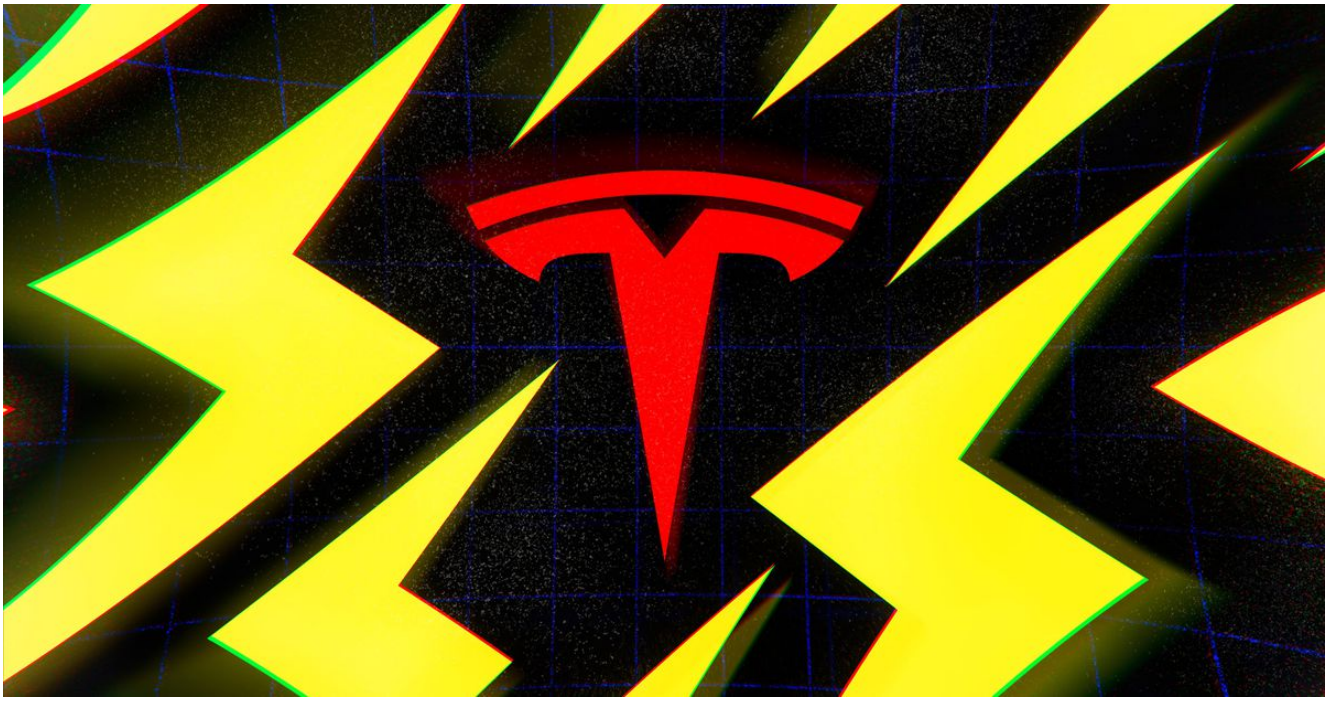
Here are Tesla’s biggest announcements from Battery Day



At Tesla’s Battery Day event, CEO Elon Musk made some big announcements: the company’s moves toward eliminating cobalt in its batteries, a new Plaid powertrain for the Model S that could get to speeds of 200 mph, and a new cathode plant to streamline its battery production. And, with the new battery technology, Musk has said Tesla will make a $25,000 car.

The socially-distanced outdoor event had Musk and other presenters addressing Tesla shareholders in parked cars, who honked their horns to indicate their approval of the speakers’ remarks– almost like a drive-in movie/shareholders meeting.

Here are the main takeaways from Tesla’s 2020 battery day:

Tesla plans to manufacture its own “tabless” batteries, which will improve its vehicles’ range and power. The new batteries will be produced in-house, which Musk says will reduce costs and bring the sale price of Tesla electric cars closer to

gasoline-powered cars. It’s expected to lower Tesla’s cost per kilowatt hour, a key metric used to measure electric vehicles’ battery packs. The tabless cells (Tesla is removing the tab that connects the cell and what it’s powering), which Tesla is calling the 4860 cells, will make its batteries six times more powerful and increase range by 16 percent.

Tesla currently sources its batteries from Panasonic, and is likely to keep doing so for some time, but moving battery production in house has been on Musk’s to-do list for some time; in 2018 a shortage of those cells added to production delays. Musk has said the pace of battery production at Panasonic had slowed production of both the Model 3 and the Model Y.

Musk has been teasing the Plaid powertrain for a while, which will be a step above its Ludicrous model. It will have a range between charges of 520 miles, get from 0-60 mph in under two seconds, and a top speed of 200 mph. The price is listed on Tesla’s website at $139,990. Musk had noted in the past that a Plaid trim level would “cost more than our current offerings,” which it does. It will be available in the Model S in late 2021.

Musk said Tesla will build a new cathode plant for its batteries in North America, part of its quest to reduce supply chain costs and simplify cathode production. It’s also making improvements to its process that will make cathodes 76 percent cheaper, and produce zero wastewater. The company also plans to diversify the cathodes it uses, because of low nickel supplies.

We don’t know where the new cathode plant will be built, but Musk said in July when Tesla announced its next factory would be in Austin, Texas that he would “strongly consider” runner-up city Tulsa, Oklahoma for future projects.

Tesla plans to eliminate the use of cobalt in its cathodes.

Musk has said he wanted to eliminate it entirely in the past — even though Tesla's existing batteries use very little. Cobalt is often mined under conditions that violate human rights, which has led to a push to find other materials to replace it.

Musk didn't offer a timeline for when the company will stop using cobalt but said it will make its batteries significantly cheaper.

"It's absolutely critical that we make cars that people can people can actually afford," he said. "Affordability is key to how we scale."

Tesla plans to reduce the cost of its battery cells and packs, with an end goal of building a $25,000 electric car. Tesla will hit this goal using its new "tabless" battery cells, and changing the materials inside the cell, which he said should allow Tesla to "halve" the price per kilowatt-hour, Musk said.

This isn't the first time Musk has predicted that Tesla would dramatically reduce the costs of its electric cars. He first promised a $25,000 EV back in 2018, which he said was possible within three years.

https://www.theverge.com/2020/9/22/21450840/tesla-battery-day-production-elon-musk-tabless-range-cathode-cobalt-plaid