

How China built BYD, its Tesla killer

The leading Chinese EV company has posted two years of million-car growth in sales

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China's BYD was a battery manufacturer trying its hand at building cars when it showed off its newest model in 2007. American executives at the Guangzhou auto show gaped at the car's uneven purple paint job and the poor fit of its doors. "They were the laughingstock of the industry," said Michael Dunne, a China auto industry analyst.

Nobody is laughing at BYD now.

The company passed Tesla in worldwide sales of fully electric cars late last year. BYD is building assembly lines in Brazil, Hungary, Thailand and Uzbekistan and preparing to do so in Indonesia and Mexico. It is rapidly expanding exports to Europe. And the company is on the cusp of passing Volkswagen Group, which includes Audi, as the market leader in China.

BYD's sales, over 80 per cent of them in China, have grown by about a million cars in each of the past two years. The last automaker to accomplish that in even one year in the American market was General Motors (GM) — and that was in 1946, after GM had suspended passenger car sales during the four preceding years because of World War II.

"BYD's growth is unlike anything the industry has seen in many decades," said Matt Anderson, curator of transportation at the Henry Ford Museum in Dearborn, Mich.

BYD has shown how Chinese carmakers can tap the country's dominance of electrical products. No company has benefited as much from China's embrace of battery-electric cars and plug-in



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gasoline-electric cars. These vehicles together make up 40 per cent of China's car market, the world's largest, and are expected to be more than half next year. Like most Chinese automakers, BYD doesn't sell its cars in America because Trump-era tariffs remain in place, but BYD does sell buses in the United States.

With China's and BYD's success has come more scrutiny.

Elon Musk, the chief executive of Tesla, warned about the strength of Chinese electric car exports in a company earnings call in January. "Frankly, I think if there are not trade barriers established, they will pretty much demolish most other companies in the world," he said.

The rapid gains by BYD and other Chinese automakers in Europe have prompted a European Union investigation of Chinese government

subsidies and could result in tariffs. BYD's annual reports show a total of \$2.6 billion in government assistance from 2008 through 2022. And that does not include other help, like making sure that taxi companies in BYD's hometown buy only BYD electric cars. BYD declined to comment about subsidies. In a statement, the company said the BYD Explorer No. 1, its new ship, "signifies a significant milestone for BYD as it expands into international markets and contributes to the development of the global new-energy vehicle industry." China has built enough factories to make more than twice as many cars as its market can buy. That has led to a price war in China, particularly between BYD and Tesla, with discounting that has inflicted heavy losses. One of BYD's newest models, the subcompact Seagull, starts at less than \$11,000.

BYD's chairman, Wang Chuanfu, founded the company in 1995 to make batteries for Motorola and other consumer electronics firms. In 2003, BYD bought a factory in Xi'an that was building gasoline-powered cars. But the firm had trouble at the start, gaining an early reputation for building clunkers. In a visit to the factory in 2006, a large repair area at the end of the assembly line was clogged with newly built cars that already needed more work. BYD's sales grew as the market soared. Warren E. Buffett bought a nearly 10 per cent stake for \$230 million in 2008, giving BYD not just a cash infusion but also global cachet. The same year, Mr. Wang promised to start exporting battery-electric cars to the United States within two years.

But electric cars at the time cost a lot to build and had limited range, and Mr. Wang had to scotch his plans to enter the American market. In an interview in 2011, he second-guessed his emphasis on battery-electric cars. Automakers should focus on gasoline-electric hybrids, he declared. He added, "There is still tremendous potential in the

Chinese market for electric cars."

By 2012, car production in China had caught up with demand. Buyers became choosier. BYD's car sales and stock price plunged as multinationals offered more stylish models. Industry executives and analysts questioned whether BYD had a future. But Mr. Wang proceeded to make two risky bets that paid off. In 2016, he hired Wolfgang Egger, a prominent Audi designer, who in turn hired hundreds more car engineers with bold tastes. They completely redesigned BYD's models.

Mr. Wang also figured out how to replace the industry's standard chemicals in rechargeable lithium batteries — nickel, cobalt and manganese — with cheaper iron and phosphate. But early batteries made from the inexpensive chemical compounds ran out of juice quickly and had to be recharged after even short trips.

In 2020, BYD introduced its Blade batteries, which closed most of the so-called range gap with nickel-cobalt batteries at a fraction of what they cost. Tesla began making and selling large numbers of cars in China the same year, and enthusiasm for electric cars swept the nation. BYD was ready with inexpensive battery chemistries and Mr. Egger's new designs.

After dismissing autonomous driving a year ago, BYD swung into action when the consumer electronics companies Huawei and Xiaomi introduced cars with considerable autonomous driving abilities. Mr. Wang announced in January that BYD had 4,000 engineers working on assisted driving, a limited form of autonomous technology that works mainly on highways and large roads, and would invest \$14 billion in the technology.

BYD has a lingering advantage over Tesla: Mr. Wang's decision by 2011 to develop plug-in hybrid cars, which account for nearly half of BYD's sales.