'Million-mile' Tesla battery to make EVs cheap as petrol cars

Power costs

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Beijing | Electric car maker Tesla plans to introduce a new low-cost, long-life battery in its Model 3 sedan in China this year or early next year that it expects will bring the cost of electric vehicles in line with petrol models, and allow EV batteries to have second and third lives in the electric power grid.

For months, Tesla chief executive Elon Musk has been teasing investors, and rivals, with promises to reveal significant advances in battery technology during a "Battery Day" in late May.

New, low-cost batteries designed to last for a million miles (1.6 million kilometres) of use and enable electric Teslas to sell profitably for the same price or less than a petrol vehicle, are just part of Mr Musk's agenda, people familiar with the plans told Reuters.

With a global fleet of more than 1 million electric vehicles that are capable of connecting to and sharing power with the grid, Tesla's goal is to achieve the status of a power company, competing with such traditional energy providers as Pacific Gas & Electric and Tokyo Electric Power, those sources said.

The new "million mile" battery at the centre of Tesla's strategy was jointly developed with China's Contemporary Amperex Technology (CATL) and deploys technology developed by Tesla in collaboration with a team of academic battery experts recruited by Mr Musk, three people familiar with the effort said.

Eventually, improved versions of the battery, with greater energy density and storage capacity and even lower cost, will be introduced in additional Tesla vehicles in other markets, including North America, the sources said.

Elon Musk has been teasing investors with innovation promises. PHOTO: BLOOMBERG

Tesla's plan to launch the new battery first in China and its broader strategy to reposition the company have not previously been reported. Tesla declined to comment.

Tesla's new batteries will rely on innovations such as low-cobalt and cobalt-free battery chemistries, and the use of chemical additives, materials and coatings that will reduce internal stress and enable batteries to store more energy for longer periods, sources said.

Tesla also plans to implement new high-speed, heavily automated battery manufacturing processes designed to reduce labour costs and increase production in massive "terafactories" about 30 times the size of the company's sprawling Nevada "gigafactory" – a strategy telegraphed in late April to analysts by Mr Musk.

Tesla is working on recycling and recovery of such expensive metals as nickel, cobalt and lithium, through its Redwood Materials affiliate, as well as new "second life" applications of electric vehicle batteries in grid storage systems, such as the one Tesla built in South Australia in 2017. The car maker also has said it wants to supply electricity to consumers and businesses, but has not provided details.

Reuters reported exclusively in February that Tesla was in advanced talks to use CATL's lithium iron phosphate batteries, which use no cobalt, the most expensive metal in EV batteries.

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