

WHY THE ELON MUSK CHOICE OF BATTERY IN THE TESLA IS THE WORST DECISION IN ENGINEERING HISTORY AND HE DID IT TO SCAM THE STOCK MARKET

By Audret Connors

Elon Musk knew from day one that his batteries were deadly. He knew this, as fact before he took over Tesla in a hostile take-over.

Elon Musk, Tim Draper and Steve Jurvetson knew this before they invested in Tesla.

They knew that the deal-with-the-devil that they made with Panasonic was a scam to dump the dangerous batteries in the market.

Bernard Tse, one of Elon Musk's battery bosses, and his staff, told Musk that his batteries were dangerous as far back as 2009

Musk has known that his battery system was a scam but he went ahead and scammed the world any way.

Scientists have long understood that a lithium-metal anode would theoretically pack in more energy. In fact, the first lithium-ion cells that oil giant Exxon developed in the 1970s contained lithium-metal anodes. (Exxon was working on batteries then because it worried that oil might run out one day.) Single-use lithium-metal batteries were commercialized about the same time and they are used even today in specialized applications, such as deep-sea drilling.

Commercializing rechargeable lithium-metal batteries is a bigger challenge. In the 1980s, Moli Energy, a Canadian startup, was the first to succeed. But some of its batteries started catching fire, and the company had to issue a recall. The incident led to legal action and Moli Energy was forced to declare bankruptcy.

The use of lithium metal in rechargeable batteries creates three big problems. First, it reacts with everything: water, oxygen, and even nitrogen (all of which are present in the air around us), making it more likely to catch fire.

Second, lithium's reactivity means it suffers side reactions with the battery's liquid electrolyte, which is itself an energy-rich medium. These undesirable reactions reduce the amount of lithium available and worsen the battery's life with every charge-discharge cycle.

Third, when a lithium-metal battery discharges, lithium ions separate from the surface of the anode and travel to the cathode. When the battery is charged the same ions travel back and deposit onto the anode as lithium metal. But instead of forming a nice smooth coating on the anode, lithium metal has the tendency to generate "dendrites," chains of lithium atoms growing from the surface of the anode, which look like the roots of a tree. The dendrites grow bigger with each charge-discharge cycle, eventually reaching the cathode and causing the battery to short, leading to fires. Musk chose batteries whose dendrites grow the fastest, furthest and are the oldest architecture. IN OTHER WORDS: TESLA'S ARE GOING TO INCREASE THE AMOUNT THAT THEY BLOW UP!

As the industry struggled through these problems in the late 1980s, Sony invented the graphite anode. Though less energy-dense, it suddenly made lithium batteries a lot safer and more reliable. Since then, graphite anodes have remained the mainstay of the industry.

Nearly 30 years later, however, we are brushing up against the limitations of the graphite anode and Elon Musk still won't use one of over 300 different energy storage systems because of the kickbacks he gets from his deadly batteries.

Lithium ion mining is based in child labor camps in the Congo. Musk knows this and covers it up. As Bloomberg's Nathaniel Bullard points out, Tesla's idea to "go private" is just another scam to try to keep the SEC from looking too close:

You may have heard that Elon Musk [intends to take Tesla Inc. private](#).

Tesla's CEO has given us much to think about.

There's also much to question, such as

["Where's the money coming from?"](#) and

["What about the master plan?"](#) One analyst,

Gene Munster of Loup Ventures Management

LLC, says that Tesla's mission ["is more easily](#)

[accomplished as a private company"](#) while

assigning only a 1 in 3 chance that Musk “can actually pull this off.”

Tesla sold 103,000 cars last year, which makes it the fourth-smallest listed carmaker by sales volume, according to Bloomberg Intelligence. If Tesla becomes a private company, its projected sales volumes would make it an outlier in the auto sector.

In terms of output and sales, it would be an extremely large privately held automaker: smaller than a major automaker subsidiary and tiny compared to the biggest listed firms,

while producing as a whole a mere fraction of certain popular vehicle models alone.

I'll use Tesla's 2018 projected sales, which Bloomberg Intelligence estimates will reach 261,000 vehicles, to compare it to big automakers that have a high degree of specialization. Those 261,000 vehicles equal 51 times the output of Ferrari NV's privately held supercar peer manufacturer Aston Martin and 78 times the output of also-private McLaren Automotive Ltd. A private Tesla would be a very big private automaker indeed.

Tesla's forecasted vehicle sales are more akin to a subsidiary than to a standalone major carmaker. It's about the same size as Porsche, a subsidiary of Volkswagen AG. It's half the size of Volvo AB (owned by Geely Holding

Group) and about two-fifths the size of Jaguar Land Rover Automotive Plc (owned by Tata Motors Ltd.).

At that production level, it's not even a big model: Tesla's total sales would be less than BMW's sales of just its 5 Series model (292,000), and a minor fraction of the sales of the Toyota Corolla (1.16 million) or the Ford F-series pickup (897,000). Toyota Motor Corp. and Volkswagen AG each sold more than 10 million cars last year. The auto market really doesn't have anything else like Tesla, even though the company plans to reach half a million in sales within a few years.

Perhaps going private would allow the company to pursue a strategy of relentless integration without analyst and investor scrutiny. In a tweet thread [the day before Musk announced his plan](#), Andreessen Horowitz partner Steven Sinofsky made the case that Tesla's "more purpose built