

Alternative Power Report

March 13, 2025

News on Alternative Power Sources



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Moving from ICE To Alternative Power

As manufacturers continue to shift their equipment production from ICE to alternative power sources, they need the latest information. That's why analysts at Power Systems Research continue to revise our global data and forecasts to provide the freshest picture available.

Elon Musk and His EV Car Company Tesla Make News

Political Activities Affect EV Sales

By *Guy Youngs*, Forecast & Adoption Lead



EDITOR'S NOTE: Elon Musk and his Tesla EV car company have been in the news around the world recently, so we're taking this opportunity to collect these news items and sort through them to identify trends and key developments.

When the Electric Vehicle revolution started, Tesla was at the forefront of this big change and it could be argued that without Tesla, the EV revolution may not have taken place. But recent news has been flooded with articles about Tesla, so what is happening?

It all started to go downhill for Tesla just after President Trump appointed Elon Musk Tesla's major investor and chief executive, as head of the Department of Government Efficiency (DOGE). One of the early signs was Elon Musk's commentary on the (at that time) ongoing German elections, which went down very badly with the German electorate, and vehicle sales started to tumble.



VEHICLE SALES

This year, Tesla's sales in January and February have crashed. In Europe, sales in January were down significantly and continued to fall in February with sales down everywhere between -34% and -77%. The UK was the exception with sales down in January but up in Feb (+7.7%) **Click here**. Tesla also recorded substantial sales drops in China, with 51% fewer Teslas sold in January

Editor's Note: This monthly report includes news and analysis about EV and alternative power sources such as batteries and fuel cells from analysts at Power Systems Research.

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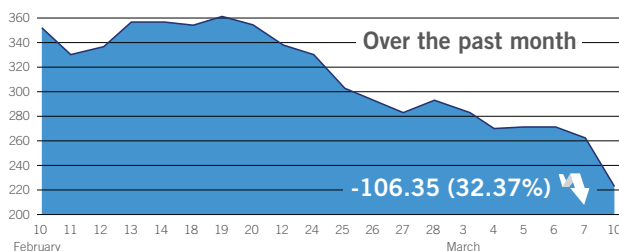
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and 49% fewer than it sold last February [Click here](#). There is speculation that this is partially a result of model changeovers. While this is true, 2024 figures also were affected by a model changeover.

Meanwhile, Elon Musk said recently that Tesla will double its electric vehicle production in the U.S. in the next two years. Musk's phrasing of the statement suggests that Tesla is planning to add previously unannounced production capacity in response to Trump's policies. However, there appears to be some exaggeration behind this claim. Tesla produced around 700k cars in the USA in 2024 against a capacity of 1million units. So, it seems as though these dots don't quite connect. [Click here](#)

STOCK PRICE TUMBLES

Apart from falling vehicle sales, some of the Tesla concern has been about tumbling share prices. Tesla will likely be trading at a 500+ P/E after reporting Q1 2025 earnings (The price-to-earnings (P/E) ratio measures a company's share price relative to its earnings per share). The last time Tesla traded at these levels, Musk warned Tesla employees that the stock would get crushed "like a soufflé being smashed by a sledgehammer" if it didn't show profit growth. And it looks like he was right. In the month up to March 10, 2025, Tesla shares fell by a third. [Click here](#)



The automaker's valuation has now dipped back below \$1 trillion from a high of US \$1.4 trillion. For reference, Toyota's P/E is 7, so this suggest that Tesla stock may be massively over priced.

WHAT ELSE IS HAPPENING?

There has been a wide range of actions taken that seem to be having a detrimental effect on Tesla sales and share prices:

- **Peaceful Protests.** Tesla was hit by a wave of protests across dozens of its stores in North America this month. With sales crashing and the company directors selling



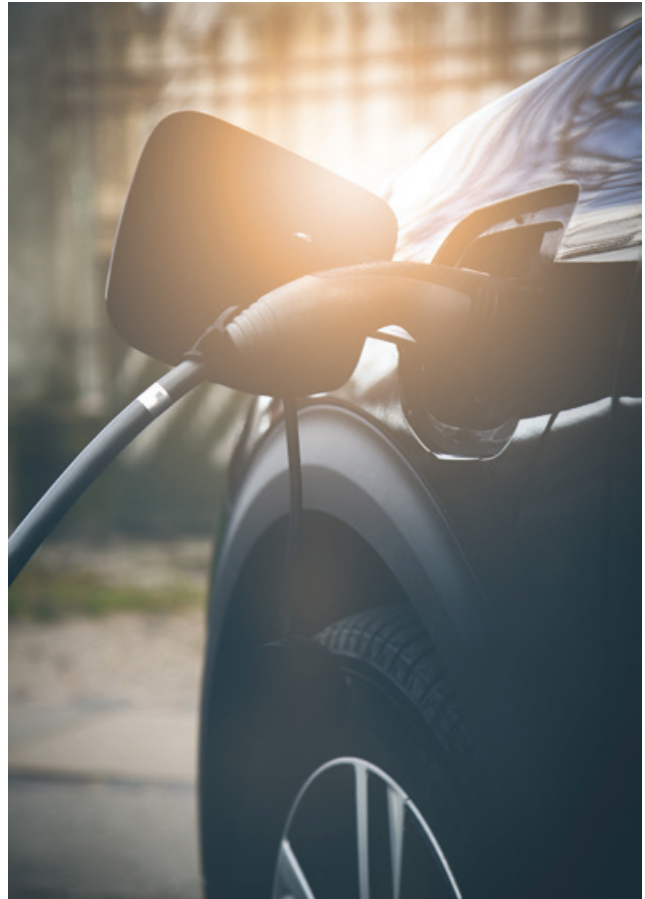
their Tesla stock, it looks like some insiders are finally waking up. [Click here](#). A grassroots movement has sprung up to organize protests against Elon Musk at Tesla stores around North America and across Europe. The protests appear to have been quite successful, with primarily peaceful demonstrations in front of Tesla stores. [Click here](#)

- **Violent Protests.** A dozen Tesla vehicles were burned at a store in Toulouse, France. Arson is suspected amid global protests and vandalism attacks against Tesla and Elon Musk. Recently, a dozen Tesla vehicles burned down at Tesla's retail and service location in Plaisance-du-Touch near Toulouse, France. [Click here](#). And there also have been violent protests in the USA with arson and shots fired at Tesla stores. [Click here](#)
- **Internet Memes.** The internet abounds with anti-Tesla memes, some of which started back when the Cybertruck was first launched.
- **Second-hand Sales.** British drivers are offloading Teslas in record numbers amid a political backlash against Elon Musk, the company's chief executive. Figures from Auto Trader showed that 4,822 second-hand Teslas were advertised on the car site in February and 4,639 in January, a significant increase on previous months. [Click here](#)

- **Should I Sell My Tesla To Protest Musk's Political Activities?** A Tesla celebrity owner wonders if that company's anti-democratic values are an ample reason for selling their proven, premium electric vehicle. [Click here](#)
- **Camouflage.** Tesla owners are finding creative ways to distance themselves from Elon Musk. They are now removing Tesla logos from their vehicles, replacing them with badging from other automakers, and even using projections on a Cybertruck in one case. [Click here](#)

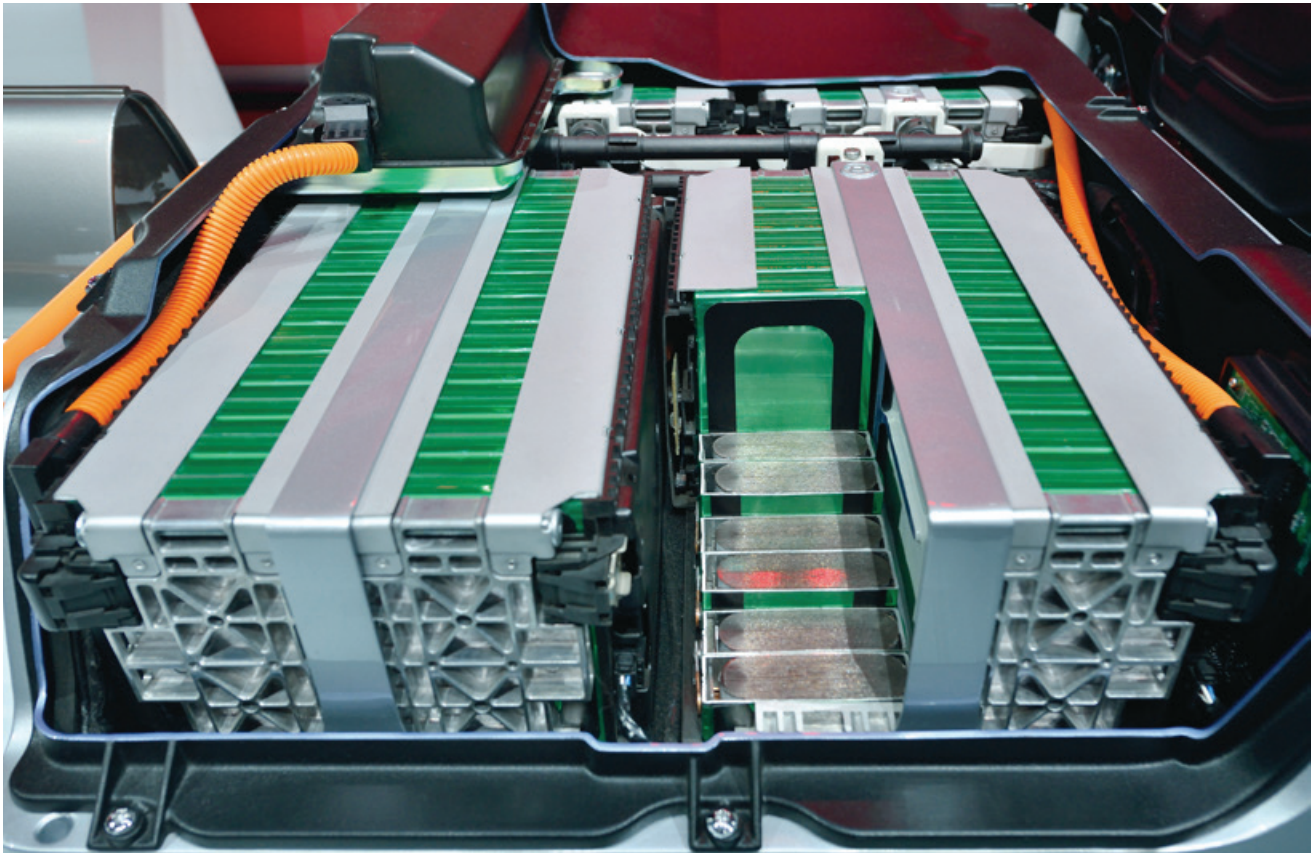
We previously reported on the surge in sales of stickers reading variations of "I bought this car before I knew Elon was crazy." One particular business selling such stickers claimed to be selling hundreds per day as Tesla owners are looking to distance themselves from the automaker's CEO.

- **Fund Managers.** The American Federation of Teachers (AFT) labor union is urging asset management firms to reconsider Tesla's (TSLA) valuation, highlighting particular concerns tied to potential risks for teacher pension funds, which have millions invested in the EV maker [Click here](#)
- **Rivals.** On Feb. 22, Swedish carmaker Polestar launched an unprecedented anti-Musk marketing campaign. Polestar is giving you the opportunity to distance yourself from Elon Musk. Through a vast seduction campaign titled 'Tesla Conquest', a Swedish brand, created by Volvo, is clearly hoping to win back disappointed Tesla owners. The brand has set itself the challenge of attracting Tesla's disappointed customers and getting them to invest in the Polestar 3 model. To do so, it's offering a USD 5,000 (€4,600) bonus and a leasing contract on preferential terms, including insurance, maintenance and repairs. [Click here](#)
- **Canada Tariffs.** One Canadian politician has proposed implementing a 100% tariff on Tesla vehicles in response to US tariffs on Canadian goods. But it has been suggested that a better way (for Canada) would be to allow Chinese EV's into Canada [Click here](#)
- **The Legend of the 'Tesla Killer' Finally Came True.** The legend of the 'Tesla killer' is not a myth anymore. It came true, and it's not an electric vehicle from a legacy automaker or a new EV startup; it's Elon Musk, Tesla's



CEO. In the early days of Tesla, the media loved to use the term 'Tesla killer' every time a legacy automaker launched a new EV. At the time, we scolded them for using it, as they would apply it to electric vehicles that didn't match Tesla's performance, production volumes, or profitability. [Click here](#)

- **Who Will Buy Tesla When It Goes Bankrupt?** Tesla insiders are racing to unload their shares in the company while they still can. These insiders are bailing out like rats deserting a sinking ship. It is curious that rather than lifting a finger to rein in the man who made them all multi-millionaires, they are now cashing out.
- **The Worries for Musk, Aren't Just About Tesla.** Billionaire Carlos Slim reportedly cancels \$22 billion in Starlink orders due to Elon Musk's unfounded claims regarding Slim's personal activities. [Click here.](#) Slim decided his giant telecoms company, América Móvil, would no longer need to spend \$22 billion on Starlinks in the next few years. Initially, just about 5 minutes after Musk's tweet, Slim canceled a \$7 billion Starlink order.



An hour later, the full \$22 billion investment plan had been pulled. Instead, Slim is going to turn to Chinese and European companies.

PSR Analysis: The level of reaction to Elon Musk has been simmering for some time and now has burst into the forefront since his recent appointment to DOGE. The magnitude of the protests around the world may have caught many by surprise, but if it continues much longer, Tesla will be faced with a difficult decision. Is it time to get rid of Elon Musk? Musk owns around 13% of Tesla, so there is scope for this to happen, but unless the other shareholders take action, Tesla may face serious long-term problems. **PSR**

US Is Losing The Solid-State EV Battery Race, Big Time

Now that President Trump has throttled back on clean tech innovation in the US, the field is wide open for other nations to leap into the gap. And, they are doing so.

Ilika is known for its micro-batteries, the firm is now heading towards commercial production of its "Goliath"

solid-state EV battery with an assist from the UK government. In September, the company announced that a prototype version of its Goliath solid-state EV battery cell passed a critical safety test, and things have been moving along quickly since then. On Oct. 3, the company reported that the completion of additional safety tests for its D5 prototype solid-state EV battery

Today's Li-ion EV batteries are designed with safety at the forefront. Though fires can occur, they are extremely rare, and they are proportionally rarer than fires involving internal combustion vehicles. So, if a solid-state EV battery can reduce if not eliminate the need for elaborate safety systems, the payout can be significant for automakers seeking a foothold in the affordable EV market of the future

Source: *Clean Technica* **Read The Article**

PSR Analysis: Why is this important? What we have here is a small UK-based battery company which is making considerable progress (possibly even leaping into a market leading position) while the USA is still in political and economic turmoil (tariffs, staff lay-offs, budget reductions, court cases, etc.). **PSR**

US Trade War Causes Turbulence in Battery Industry

The battery and energy storage industry is watching intently the pending trade war between the US and its trade partners. Few industry players are willing to talk on the record about the situation – not least because it is a turbulent and unclear time.

But James Greenberger, executive director of the battery association NAATBatt International told BEST that trade tariffs may benefit certain industries in the US. But the lithium battery industry “will not be one of them,” he said.

Source: *BEST Magazine* [Read The Article](#)

PSR Analysis: Tariffs cause uncertainty, and above all businesses crave economic stability. Trying to persuade a hypothetical investor to invest \$1 billion in a battery or battery materials plant that will take about three years to build and which has to run profitably for at least 10 years afterwards in order for investors to receive an acceptable return, is unlikely to happen in these uncertain times. **PSR**

Renault's Solution for Battery Fires Available To Everyone

Renault has devised a device to speed up the extinguishing of a burning electric car battery. This “Fireman Access” point is now licensed free of charge to the entire automotive industry.

A fire can be brought under control in time comparable to that of a combustion-powered vehicle, thanks to a simple little device.

An adhesive disc covers an opening in the vehicle's traction battery housing. This little seal ensures that the battery remains watertight during normal vehicle use. However, in the event of a vehicle fire spreading to the battery, this disc easily gives way under the spray of the lance. This allows the cells to be flooded, preventing thermal runaway of the battery.

Source: *MSN* [Read The Article](#)

PSR Analysis: Developed as a co-operation between Renault and fire departments, this device could potentially save lives and be Renault's Seat Belt moment (Nils Bohlin, an engineer at Volvo, invented the three-



point seat belt in 1959. Volvo decided that the invention was so significant, it had more value as a free lifesaving tool than something to profit from, and cemented Volvo's reputation for safety. **PSR**

Ford CEO Warns Tariffs Will 'Blow Hole' in US Auto Industry

As automakers brace for new tariffs on imports from Mexico and Canada, Ford's CEO Jim Farley is warning the extra costs would be “devastating.” Farley said the threats are already creating “chaos” and “a lot of costs” for the US auto industry.

So far, however, “what we're seeing is a lot of cost and a lot of chaos,” Farley added. Ford is looking for ways to build up inventory in the US to soften the blow of Trump's tariffs.

Although Ford is less exposed than rivals like GM and Jeep maker Stellantis, it is still expected to take a hit from suppliers that will be impacted, executives explained at the event

Source: *Electrek* [Read The Article](#)

PSR Analysis: The US auto industry is already falling behind China, with China by far the world's largest EV market, but Chinese leaders, like BYD, are quickly expanding overseas, stealing market share from legacy automakers. These tariffs, and their effects could be the start of the death knell for US legacy car makers. **PSR**

BYD May Have New Power Play in EV Lithium Mining

BYD (Build Your Dreams) is best known for its electric cars, such as the Seagull, Dolphin, and Atto 3, but the company does much more than just build affordable EVs. Its early beginnings as a battery maker back in the 90s helped propel BYD to become the electric vehicle powerhouse it is today. In 1998, it became the second-largest rechargeable battery maker, and in 2003, it entered the auto business.

Newly discovered documents show that BYD may have a new power play in the works regarding mining rights in "Brazil's lithium valley." According to documents viewed by Reuters, BYD has mining rights in Brazil at two sites.

Source: *Electrek* [Read The Article](#)

PSR Analysis: BYD, and by inference, China is clearly playing the long game in the EV revolution. This expansion comes at a time when USA is pulling back from the EV movement and signals the continuing dominance of China in this field. **PSR**

Sodium-Ion vs. Lithium-Iron-Phosphate Batteries

Researchers in Germany have compared the electrical behavior of sodium-ion batteries (SiB) with that of lithium-iron-phosphate batteries (LiB) under varying temperatures and state-of-charges. Their work shows how state-of-charge during cycling significantly affects the efficiency of sodium-ion devices.

"SiBs are generally seen as a drop-in replacement for LiBs,"



the scientists stated. "Nevertheless, the differences in the electrochemical behavior of sodium and lithium require adaptations on both the anode and the cathode. While for LIBs usually graphite is used as anode material, for SiBs hard carbon is currently seen as the most promising material for SiBs."

Source: *PV Magazine* [Read The Article](#)

PSR Analysis: This research shows that Sodium Ion Batteries are not direct replacements for Lithium Ion batteries as changes in the anode and cathode material are required. It's not clear at this stage as to whether or not there is a significant cost variance between the two types of anode and cathode. **PSR**

Bosch's Exit from Fuel Cells Signals Turning Point for Hydrogen Innovation

Bosch has announced a significant strategic realignment that underscores its commitment to hydrogen technology. The company will cease its development of solid-oxide

fuel-cell technology, a decision rooted in the slower-than-expected market adoption of these systems.

Instead, Bosch will prioritize hydrogen production technologies, particularly proton-exchange membrane (PEM) electrolysis components, which it aims to bring to market this year.

Bosch's decision to pivot toward hydrogen production reflects both market realities and the global energy sector's increasing reliance on hydrogen as a key enabler of renewable energy transitions. The company has highlighted growing demand for green hydrogen, particularly in industrial applications and heavy transport, as a basis for its strategic shift

Source: *Hydrogen Fuel News* [Read The Article](#)

PSR Analysis: Bosch's pivot to focus on PEM electrolysis and hydrogen production signals a pragmatic recalibration of its energy strategy. With hydrogen poised to play a central role in global decarbonization efforts, Bosch's realignment places it in a favorable position to leverage emerging opportunities. **PSR**

Mercedes Tests World's Solid-State Battery EV with +621 Miles Range

Mercedes has hit a big milestone, taking its solid-state EV battery tech from the lab to the real world. In late February, the company announced it has officially put "the first car powered by a lithium-metal solid-state battery on the road" through its partnership with US-based Factorial Energy.

With a "breakthrough" energy density of 450 Wh/kg, Factorial said the new Solstice battery is expected to provide 80% more driving range than current lithium-ion batteries. Mercedes expects the new battery to extend the driving range by about 25%. The current EQS 450+ rated with up to 511 WLTP miles range would suggest a driving range of over 620 miles.

Source: *Electrek* [Read The Article](#)

PSR Analysis: The rate of technological advancement is truly astounding, and we have to ask whether Mercedes has stolen a march on its competitors, but significant range increases, weight reduction and improved safety, truly does sound like a dream come true. **PSR**



A Final Note

Hydrogen Electrolysis Cost Projections from major organizations low by 60% to 300% – [Click Here...](#)

Hydrogen Over Diesel? Why this engine tech is driving the future of heavy-duty vehicles - [Click Here...](#) **Sodium-ion Battery Study** offers power and energy breakthrough with new organic cathode – [Click Here...](#) **Toyota's All-Solid-State** EV battery plans just got a lift from Japan's oil giant - [Click Here.](#) **PSR**



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