

Charging ahead: Five EV and mobility predictions for 2024

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This year is going to be a pivotal year for <u>EVs and mobility</u>. From infrastructure expansion and scaling supply chains to political changes and advancements in technology, the EV industry is set to experience a year of transformation and critical decision-making.

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Here are some of our 2024 predictions that highlight the trends and shifts we expect will shape the EV sector in the coming year.

Utilities will be proactive with spending to prepare for scaled EV deployment

We expect utilities to experiment with various strategies to prepare for the growing demand for EV charging infrastructure. This proactive approach will involve investing in and upgrading the grid to make sure sufficient power is available for EV charging. In just the past year, we've seen several utility oversight changes proposed.

Over the past few years, utilities have faced criticism for not moving fast enough to adapt to the increasing demand for EV charging infrastructure. In response, regulators are now enabling (or requiring) utilities to engage in more-proactive spending, planning, and coordination with key stakeholders (e.g., site hosts,

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Although these shifts remain largely unproven and experimental so far, they present a notable change in utility commitment (and risk) when it comes to supporting and investing in transportation electrification. Various utilities and states are exploring different methods to tackle the issue. We'll be interested to see these initiatives unfold in 2024 and learn how effective they are in addressing the demand for EV charging infrastructure.

Automakers will need to prove their dedication to EVs

After a period of enthusiastic commitments to phase out internal combustion engine vehicles and embrace EVs, some automakers are now backtracking on those pledges. We expect this trend to intensify in 2024, leading to a clear division in the market.

We've already seen this happen before: some automakers doubling down on their investments in electrification while others resist making the commitment, claiming current tech or markets aren't ready.

This year is a critical juncture for automakers, where they'll need to prove their dedication to EVs or face consequences in later years, both in terms of lost market share and increasing government restrictions and fines. These laggards risk becoming the Blockbusters of automotives.

This year could also serve as a turning point for commercial electrification, <u>particularly with fleets</u>. We expect more dealers and distributors to develop comprehensive strategies for integrating EVs into their fleets. And we're seeing exponential growth right now in utilities standing up or refining fleet advisory programs and services.

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Conservatives may not be as anti-EV as we thought

There's some concern that if a democrat isn't elected there will be a reduction in the spending, investment plans, and programs related to EVs. But it's possible that conservative states could become more supportive of EV investments.

This year may reveal a surprising shift in conservative states' attitudes toward EVs as some recognize the

economic benefits and job opportunities associated with the EV industry. As the US (and Canadian) domestic supply chain that supports transportation electrification continues to grow, we expect to see historically red states benefiting the most from this economic development.

Tesla will be opening its charger network to non-Tesla EVs

We're expecting notable growth in charger networks with both Tesla and non-Tesla chargers expanding at faster rates than in recent years. Traditionally, Tesla has largely been independent in its projects, often rejecting utility coordination or incentives, but this may begin to change in 2024.

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Tesla is planning to open its charging network to non-Tesla vehicles by the end of the year, marking a large shift in its network accessibility. This move is part of a broader trend toward standardization, with efforts by SAE International and others to formalize the North American Charging Standard, previously proprietary to only Tesla.

The effects of these developments on the EV market will become clearer in 2024 as questions about the reliability, capacity, and customer satisfaction of the expanded charging networks are answered.

It will be crucial to see how Tesla's network performs with the increased volume of users and whether it can keep its high standards of uptime and customer experience.

Fleet vehicles' total cost of ownership will bring new challenges

A big challenge facing the EV industry, particularly in the context of fleet vehicles like buses, is the unexpectedly high total cost of ownership (TCO).

Standard EVs are typically cheaper to maintain and operate than gas-powered vehicles due to fewer moving parts, streamlined designs, and lower energy costs. But the reality for large, heavy-duty EVs like transit and school buses is proving different.

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The TCO for these vehicles is turning out to be considerably higher than initially estimated, with up-front costs double for transit buses and triple for school buses. Additionally, operating costs (such as tire replacements, technician training, and parts) are adding to the financial burden, challenging the viability of <u>transitioning</u>

fleets to EVs.

The high TCO problem is also being compounded by the fact that supply chains have been unable to bounce back from COVID-19 impacts and scale quickly enough to meet market demand. The bankruptcy of Proterra, a major US-based electric bus manufacturer, was a stark reminder of this reality: these companies are deploying technology that's still more expensive, less predictable, less durable, and lower performing than the current technology.

This situation underscores the urgent need to drive down EV costs for medium- and heavy-duty vehicles, especially considering the Biden administration's emphasis on domestic manufacturing for incentives. We need robust, durable, no-frills vehicles that reliably get the job done.

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