

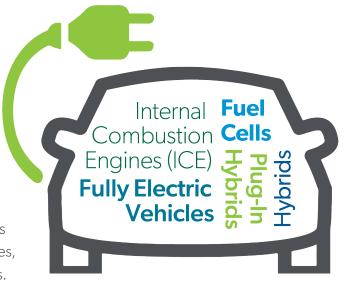


The automotive engine is amid a once-in-a-century revolution. While it's too early to predict where the market will land and which fuel source will dominate, two things are certain: we are barreling toward an electric vehicle-driven future, and auto dealers are at the epicenter of it all.

Dealers are no strangers to **adapting**, but this shift is seismic, and the topography morphs daily on every front. And while a transition to EVs may be inevitable, the path isn't obvious, and the impact on and return on investment for dealers is far from certain.

Don Hall, President of the Virginia Automobile Dealers Association, said in a **statement** on the VADA website, "In Virginia, we have more than 8 million registered internal-combustion engine vehicles on the road and there is an opportunity ahead, over the next few decades, to replace every one of them with EVs. Dealers are absolutely essential to the widespread adoption of EVs by mass-market car buyers...But we need support."

We agree. What might that support look like? Dealers face future-altering, strategic decisions about steep manufacturer requirements to sell EVs involving hefty investments in their facilities, including large capital investments required for electric chargers and upgraded service bays.



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They're also under pressure to anticipate which direction the winds of the market are blowing, to balance their EV investment against customer demand, to keep up with legislation, to remain innovative, all while prioritizing the customer experience. They're sure to sell more EVs in the coming years, and the transition demands that both their profitability models and their front- and back-end operations transform.

How can dealers navigate these market tensions, absorb the related shock waves, and profitably dual track the sale of EVs and ICE cars? This white paper illuminates the EV terrain for dealers and offers guidance for adapting to this fluid future.

The State of EV Adoption

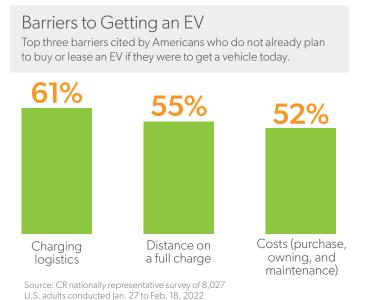
As of September 2022, there were nearly 290.8 million passenger cars on the road in the U.S., the average age of which is 12.2 years. Less than 1% of those are EVs, but adoption is growing. Sales of EVs increased 65% in 2022 over 2021—accounting for 5.7% of all car sales—and EVs, plugin hybrid EVs and hybrids accounted for 12.3% of all new vehicles sold that year, up 2.7 percentage points from 2021, according to the National Automobile Dealers Association. And Consumer Reports found that 36% of consumers are seriously considering or plan to buy or lease an EV.



Source: Plumer, Brad, et al. "Electric Cars Are Coming. How Long Until They Rule the Road?" The New York Times, 2021

That said, the barriers to EV adoption include charging logistics, distance on a full charge, and the costs associated with buying, owning, and maintaining an EV.

Range anxiety—the fear of running out of battery power before reaching a charging location—has long deterred consumers from purchasing an EV. However, battery capacity and range have greatly improved (from a median of 68 miles on a single charge in 2011 to 234 miles in 2021) and is expected to continue to increase with further advances in battery technology.



What's Driving the EV Transition?



50% of U.S. vehicles to comply with Zero Emission Vehicle programs by 2030



\$7.5B in grants for states to expand charging networks



Every international automaker committed to EV transition



Government targets EV as 65% of all auto sales by 2030



High consumer demand with 36% planning to buy an EV

Americans and most OEMs to eliminate internal combustion engines by 2035

5 states representing nearly 25% of

Several states have implemented zero-emission vehicle (ZEV) programs, which require auto manufacturers to sell a set quota of battery-electric or plug-in hybrid-electric vehicles and have passed laws that ban the sale of new gas-powered vehicles by 2035.

With zero-emission mandates spreading, consumer pressure to find climate-friendly alternatives, aggressive legislation aimed at reducing carbon emissions, and nearly every major automaker having solidified their **commitments** to an EV transition, the global conversion to EVs seems inevitable. That said, in December 2022, Toyota CEO Akio Toyoda said, "I think BEVs are just going to take longer to become mainstream than the media would like us to believe." He added that a "silent majority" in the auto industry share his view, "but they think it's the trend, so they can't speak out loudly."

In the meantime, as market tensions played out, in July 2022, the U.S. joined the other two largest car markets—Europe and China—in surpassing the 5 percent tipping point for EV mass adoption. EV sales made up 5.9 percent of new light-vehicle sales, up 57% over 2021, according to the Automotive News Research & Data Center. And Cox Automotive predicts sales of electric vehicles in the U.S. will surpass one million units for the first time in 2023. **McKinsey & Co.** says that in the U.S., EV sales have climbed by more than 40 percent a year since 2016 and predict that by 2035, the largest automotive markets will be fully electric.

EV Adoption

If electric vehicle adoption continues to accelerate, EVs are likely to account for more than half of all U.S. passenger car sales by 2030.



Source: EV-volumes.com; HIS Markit; International Council on Clean Transportation; literature search; McKinsey Center for Future Mobility; McKinsey Electrification Model

U.S. OEMs support electrification targets and have declared ICE bans by 2035, and McKinsey expects the U.S. to exceed current regulatory targets and reach 65 percent EV sales by 2030.

The auto industry will invest more than \$330 billion by 2025 to reach the goal of an electrified future, according to the Alliance for Automotive Innovation. All of that is in addition to continued improvements to conventional cars and light duty trucks to address air quality, greenhouse gas emissions and fuel economy.

Automakers are taking different approaches to align with dealers as they transition to EVs. Some, like Honda, are taking more vehicle sales online to compete with Tesla's profits. Others, like Ford and General Motors, are asking dealers to invest in significant upgrades to their lots and service bays. Toyota has no plans to revamp its franchised dealer network as it invests in EVs.

Many require dealers to participate in an EV certification program. In most cases, this requires a major up-front investment from the dealer. As of December 2022, 65% of Ford's dealers nationwide had signed up to participate in Ford's EV certification program. The program requires two levels of commitment. The first, Model e Certified, requires any dealer that signs up to invest up to \$500,000 and caps their electric vehicle sales at 25 units per year. The top level, Model e Certified Elite, requires dealers to invest up to \$1.2 million but allows dealers to sell unlimited EVs at non-negotiable prices.

Nearly 60 percent of Lincoln's U.S. retail network has signed up to sell electric vehicles, opting into a certification program that requires them to invest up to \$900,000 on charging infrastructure. The 356 dealers who agreed to meet the program's requirements represent 88 percent of the brand's sales volume.

Time will reveal which approach will prove most successful for dealers and optimal for their customers.

Dealers: At the Epicenter of the EV Transition

The transition to EVs impacts every area of a dealership. Future EV buyers expect to get EV education at their local dealership, according to Escalent's 2021 landmark research study, **EVForward**. The study also found that 57% of future EV buyers prefer the traditional dealer-centric approach to car buying, while just 20% favor a direct-sales approach.



A smooth sea never made a skilled sailor.

- Franklin D. Roosevelt

As they emerge from the **irrational exuberance** COVID spurred, which led consumers to complete an increasing amount of their car purchase remotely, dealers now face hefty strategic decisions about selling EVs while reckoning with rationalized inventory and price levels and business returning to a new normal.

The dealer road to EV profitability is muddy. Even if they decide to participate in EV certification programs, in the current environment, many dealers are going to have a hard time coming up with profitable EV sales. EVs are cost-prohibitive for most consumers, range anxiety persists, and the charging infrastructure is currently insufficient to support demand.



EV Transition Factors Impacting Dealerships

OEM EV certification programs

Upfront dealership conversion investments

Innovation

Margins

Sales models

Fixed operations revenue sources

Car-buying processes

Consumer demand

Range anxiety

Charging infrastructure

Ownership lifecycle

Customer experience

In addition, dealers are likely to face shifts in their profit pools. Prior to COVID, most dealers made up for the low margins they drew from new vehicles with F&I profits. In an EV future, that paradigm is certain to shift, demanding dealers **take charge** of their EV transition and adapt their profitability models.

In addition, only half of the states allow OEMs to sell directly to consumers, but if that changes, dealers could lose sales to manufacturers. And with the residual value of EVs yet unknown due to concerns over long-term battery performance, profitability from used EVs is hard to predict.

Putting the engine aside, the bigger question is how dealers will sell cars in the future—regardless of their fuel source. A dealer's first concerns when it comes to moving inventory are that they need to be innovative, serve their customers, and foster loyalty to their dealership brand.

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The Escalent survey also found that most of the 30,000 future EV buyers they surveyed said they prefer to have many of the phases of the carbuying process, including test driving, completing the transaction and getting the vehicle serviced, take place in-person at a dealership rather than virtually. This is great news for dealers, because opportunities to innovate abound in the areas of evolving their customer experience, up/reskilling their teams, and adapting their service offerings.

That said, here's what they're up against...

Legislative Landscape

The legislative landscape in the EV transition is a minefield, with state-level combustion engine bans looming and states being out of sync with each other and, in some cases, the broader federal government vision.

EV certification programs have caused tension between some dealers and automakers, with several dealers filing lawsuits. They've pushed back that the programs violate state franchise laws, which protect dealers' rights to sell what they want. This is an important space to watch.

The U.S. has committed that by 2030, 50 percent of cars on the road will be zero-emissions vehicles. To support this target, the **2021 Bipartisan Infrastructure Bill** allocates \$1.2 trillion for transportation and infrastructure spending over eight years, including \$7.5 billion in grants for states to expand their charging networks. The Biden administration also announced strong investments in charging infrastructure and more stringent fleet emissions targets. The administration also made EV rebates available through the Inflation Reduction Act.

In addition to federal subsidies, some states **offer** EV tax credits. And some states, including California, Massachusetts, and New York, have **banned** the sale of internal combustion engines (ICEs) by 2035. Conversely, the Wyoming state legislature proposed a ban on EVs by 2035. Although it did not pass, the proposed legislation gives a foretaste of real challenges that broad EV adoption faces.

Lithium mining, like all mining, can be environmentally and socially harmful. Currently, 95% of global lithium production is concentrated in Australia, Chile, China, and Argentina. Lithium extraction has already set a track record of land and water pollution, ecosystem destruction and violations against Indigenous and rural communities. With lawsuits over the environmental fallout of lithium mining, which is both water-intensive and -contaminating, already rising in several countries, controversy over EV adoption will continue to increase.



Zero Emission Vehicle (ZEV) Commitments

Stringent fleet emission targets

ICE bans



Charging Infrastructure Development

State charging station grants

Federal goal: 500K stations

Federal mandate: 1 every 50 miles

States must fund maintenance

OEM EV certification programs for dealers



Consumer Incentives

Federal EV rebates

State tax credits



ICE Bans

Most OEMs have promised them by 2035

25% of Americans impacted



EV Transition Mandate

States not aligned with federal vision

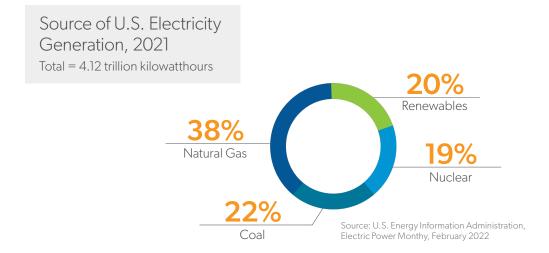
States' priority and path to electrified future out of sync with each other

Environmental Factors

The environmental considerations for an EV transition are complex and weighty, with passionate advocates on all sides. According to The Guardian, transportation is the biggest source of emissions in the U.S. and the only sector in which emissions are rising. To achieve net zero emissions, EVs would need to account for 75 percent of passenger car sales globally by 2030, which is significantly higher than the industry's current path and production pace. Further, today, an EV's production generates an almost 80 percent higher emissions intensity compared with an ICE car, due mainly to the battery and the vehicle's greater share of aluminum. This begs the question whether a transition to EVs addresses the reliance on fossil fuels problem only to create another.

Power grids, which are still often powered by fossil fuels, are increasingly vulnerable. The **Washington Post** reported that in 2020, the average American home endured more than eight hours without power, according to the U.S. Energy Information Administration—more than double the outage time five years ago.

Production of renewable electricity, which currently only accounts for 20% of electricity needed to power EVs, must increase by 5 percent to meet EV charging demand.





EV Production Emissions

80% higher than ICE cars



Renewable Electricity Production

Currently accounts for 20% of electricity needed to power EVs



Power Grid Capacity

Must increase by 5% to meet charging demand Off-peak charging incentives



Regulations

Lithium-ion mining
Parts production and recycling
Ecosystem/community impact



Lithium-ion Battery Production

Demand expected to increase by 40% by 2040

Emits greenhouse gases and contributes to global warming

Consumes 10% of all EV emissions

Battery and Parts Disposal and Recycling



Battery and Parts Disposal

Battery recycling recovers up to 95% of materials

Unrecycled batteries release gases and toxins

5% are currently recycled

U.S. Dept. of Energy \$60 million for battery recycling

Aluminum has one of highest recycling rates

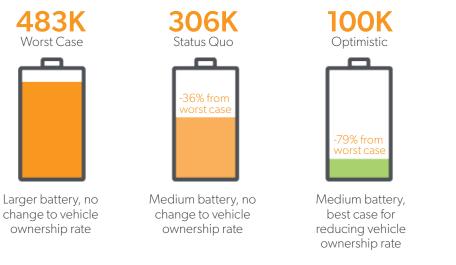
EV proponents claim the current power grids can handle EVs if demand is managed properly, such as incentivizing drivers to charge during off-peak times or making peak charging time more expensive. But responsibility for maintaining them demands significant investment and is contested by some states.

Lithium-ion battery manufacturing and disposal plays a weighty role in the environmental picture. Although EVs produce no emissions while driving, battery manufacturing and disposal consume significant energy—10% of all EV emissions—emit greenhouse gases, and contribute to global warming. For example, the manufacturing of a Tesla Model S battery requires the equivalent energy usage of 50 homes. When building a car battery, factory CO2 emissions could be as much as 74% more than what could be reduced when building an ICE car.

The demand for lithium is predicted to increase by over 40 times by 2040, driven mainly by U.S. EV adoption, and most forecasters predict a supply crunch in the next five to 10 years. Concerns also have emerged that lithium mining could spark a global environmental crisis. The U.S.'s transition to electric vehicles could require three times as much lithium as is currently produced for the entire global market, leading to possible water shortages, threats to Indigenous land, and ecosystem destruction inside and outside its borders, says **research** by the Climate and Community Project and University of California, Davis. More than half the current lithium production takes place in regions already impacted by water shortages.

Lithium Power

How Much Lithium will be Required to Power U.S. Electric Vehicles in 2050?



Source: Riofrancos, et al., 2023, "Achieving Zero Emission Transportation with More Mobility and Less Mining" and Less Mining "Control of the Control of t

Small battery, best

case for reducing

vehicle ownership

rate, widespread battery recycling

In addition, core chemical components (lead, nickel, cobalt, and lithium) in EV batteries that go un-recycled can release hazardous gases and toxins. Effective recycling programs, for both batteries and other EV parts such as copper and aluminum, are essential to minimizing their environmental impact.



Production Predictions

Electrification will cause a major shift in the entire automotive supply chain. One of the biggest issues the industry faces is reliable, cost-efficient sourcing of these key raw materials. Pricing is reaching record highs, and their supply is extremely vulnerable to geopolitical shifts.

The charging infrastructure, especially in densely populated urban areas, needs to experience dramatic growth to enable wide EV adoption. According to J.D. Power & Associates' ongoing **research**, EV adoption in the U.S. is growing at a rate that is almost double that of charger installation growth rates. The Biden administration aims to build 500,000 stations, but states will likely have to fund their maintenance. Like other federal incentives, these grants may entice states to assume what could become financial liabilities.

Further, the Biden administration requires electrical workers who install and maintain the charging stations be certified by the union-backed Electric Vehicle Infrastructure Training Program. In New Mexico, for example, the state says it lacks contractors that meet this mandate, which will reduce competition and increase costs.

The U.S. Department of Transportation is requiring states to build charging stations every 50 miles along interstate highways and within a mile of off-ramps. But most state electrical grids aren't built to handle this, so many charging stations will require expensive upgrades. Some OEM EV certification programs require dealers to install charging stations, but the ask is significant, requiring an average up-front investment of \$400,000 - \$750,000, providing an unclear benefit to the dealer or return on investment.

6 Ways to Take Charge of Your EV Future

Today, despite the transition to EVs, the "value versus price" battle exists outside of the vehicle and lives in the selling process. This means that now, more than ever, how dealers sell is significantly more important than what they sell. This involves keeping the customer front and center and teaching selling techniques that converge with the ways customers are buying.

How dealerships sell cars has changed significantly in recent years. During COVID, facing low inventory and high demand, it was easy for dealers to get complacent about sales processes and **forget about the customer**. But as we return to a more competitive market driven in part by a transition to EVs, in which deals and profits aren't landing at their feet, dealers simply can't afford to be customer-complacent. While some elements of the transition will remain outside a dealer's control, their relationship with their customers isn't one of them.

- **Customer Relationships**
- The EV market is becoming more competitive by the day. Customer relationships are one factor within dealers' control. Dealers who put the customer first and strive to provide a stellar customer experience will always win.
- Service Offering Innovations
 - EVs have fewer parts that break down, but servicing them is more complex, paving the way for new, innovative approaches to service.
- Knowledgable Experts

EVs inherently demand dealers adapt their teams' skillsets. Dealers who are already hiring and upskilling their staff to sell and service EV inventory are ahead of the game. Ongoing training and coaching will be essential as technology evolves.

Selling Best Practices

How dealers sell is more important than what they sell, no matter what powers the car. Ensuring your team is following selling best practices will be essential to a successful EV transition. Dealers should also focus on establishing proven sales processes and delivering value to customers beyond what's inherent to the vehicle.

Service Contract and Financing Innovations

Revenue opportunities exist for dealers who evolve their service protection plans to account for batteries and electronics and to provide more financing assistance for more expensive EVs.

Crystalize the Dealership Value Proposition

Dealers who prioritize crystallizing their value proposition and make it their North Star will keep their customers loyal and their doors open as they add EVs to their inventory.

Entrenching **selling best practices** will be essential for dealers to facilitate a smooth transition. Peter Maxwell, vice president, commercial automotive client services for MarketSource, says, "Dealers are going to sell vehicles, no matter how they're fueled. They must sell what the manufacturer provides, but at the end of the day, their primary job is to sell, and their top priority is to meet their customers' emotional needs."

The caliber and composition of their team is also within dealers' control. The electrification trend is expected to generate demand for labor in three main areas: the design and development of electric vehicle models, the production of batteries that power them, and the installation and maintenance of charging infrastructure. Dealers will need to hire and train maintenance technicians to service high-voltage powertrain systems. Outsourcing is one way to fill and/or train for these positions quickly. MarketSource's automotive team has deep experience and a proven track record **recruiting tech teams** quickly for dealerships nationwide.

The transition to EVs still offers service revenue opportunities, but they will look different than they do today. EVs tend to have fewer mechanical parts that break down. While this will mean fewer dealership visits and service opportunities, the service required is more complex than for ICEs, so revenue opportunities may actually increase. Dealers will have the opportunity to innovate as they adapt their service offerings.



The electrification trend is expected to generate demand for labor in three main areas:

Design and development of EV models

Production of batteries that power them

Installation and maintenance of charging infrastructure

Frontline sales staff will need to be able to answer customer EV questions competently and close the sale. Dealers may benefit from staffing up their BDCs with live, virtual, knowledgeable brand experts like MarketSource's **AskMe**_®. AskMe gives customers and salespeople instant access to in-depth, expert EV knowledge, ensuring customers receive complete, accurate answers, regardless of a salesperson's experience level or technology skills. These live brand experts are virtually available in every dealership, nationwide, to customers and sales teams wherever they are, during all dealership operating hours—even at night when stores are closed. AskMe connects customers to a knowledgeable brand expert who can answer detailed product and service contract questions, help customers compare models, weigh financing options, make purchasing decisions, and get the sale.

Since EVs have less hardware that will require service, dealers will want to adapt their service contracts and their post-sale service to be relevant to EVs. McKinsey expects guaranteed asset-protection insurance, which covers any difference between the value of the vehicle and its outstanding financing in the event of a total write-off, to be most appealing to consumers, along with personalized electronics and battery-maintenance plans.

To offset the possible lower after-market parts revenue that experts predict, dealers might consider **outsourcing** their wholesale parts sales to a provider like MarketSource, who designs and implements training and critical processes for OEMs, dealers, and distributors to drive demand and achieve optimum sales, ROI, and market share through IRFs, fleet, and commercial customers.

According to **McKinsey & Co.**, EVs are typically \$5,000 to \$10,000 more expensive than comparable ICE vehicles, which will likely lead more buyers to need the help of the dealer's finance department and should result in more financing deals. While we wait for customer confidence in batteries to grow, McKinsey expects increased lease volume for EVs.



No matter how vehicles are fueled or the buying or selling conditions, making it easy for a customer to buy will never go out of style.

- Peter Maxwell, MarketSource VP of Commercial, Automotive Client Services

The value + price combination is ultimately what leads prospects to buy, making it mission-critical for dealers to crystallize their value proposition—or define it if they're lacking one. And it should become their North Star. What form that takes will differ for each dealer, but crystallizing their value proposition and keeping it at the forefront of their business will keep their customers loyal and their doors open, no matter what the market brings.

As they transition to EVs, dealers should focus on establishing proven sales processes and delivering value to customers beyond what's inherent to the vehicle. Dealers should work to build value around the dealership experience—a true differentiator—which helps customers get more value out of the product.

Customers have always needed to feel they're winning in the negotiation process. What's changed is their expectation of the buying process. Dealers should make sure theirs differentiates them and matches their customers' desires. Meet them where they are—guide them through **their own journey**.

Maxwell concludes, "Good competition is healthy—it pushes us all to work harder for our customers. If we rally around these things as a dealer body and reorient ourselves to the customer experience, we'll provide intangible customer value that creates loyalty, no matter what kind of engine fuels their inventories."

