

# The State of EV Fleet Programs: Insights from a Survey of NAFA Membership

## SECTION I: Introduction

Electrifying fleets is a complex task, but it's critical to improving the sustainability of the transportation sector and achieving the federal government's goal of a [net-zero emissions economy by 2050](#). Reducing the emissions of medium-duty (MD) and heavy-duty (HD) trucks is particularly important because they are [less fuel efficient](#) and more polluting than passenger vehicles. In fact, according to the National Highway Traffic and Safety Administration (NHTSA), MD and HD trucks emit [2.5x more greenhouse gases per vehicle than passenger cars](#), making them prime contenders for electrification. The federal government believes this segment to be so important to achieving its net zero-emissions goal that it recently allocated nearly [\\$1.5 billion](#) in federal funding to support the electrification of HD vehicles.

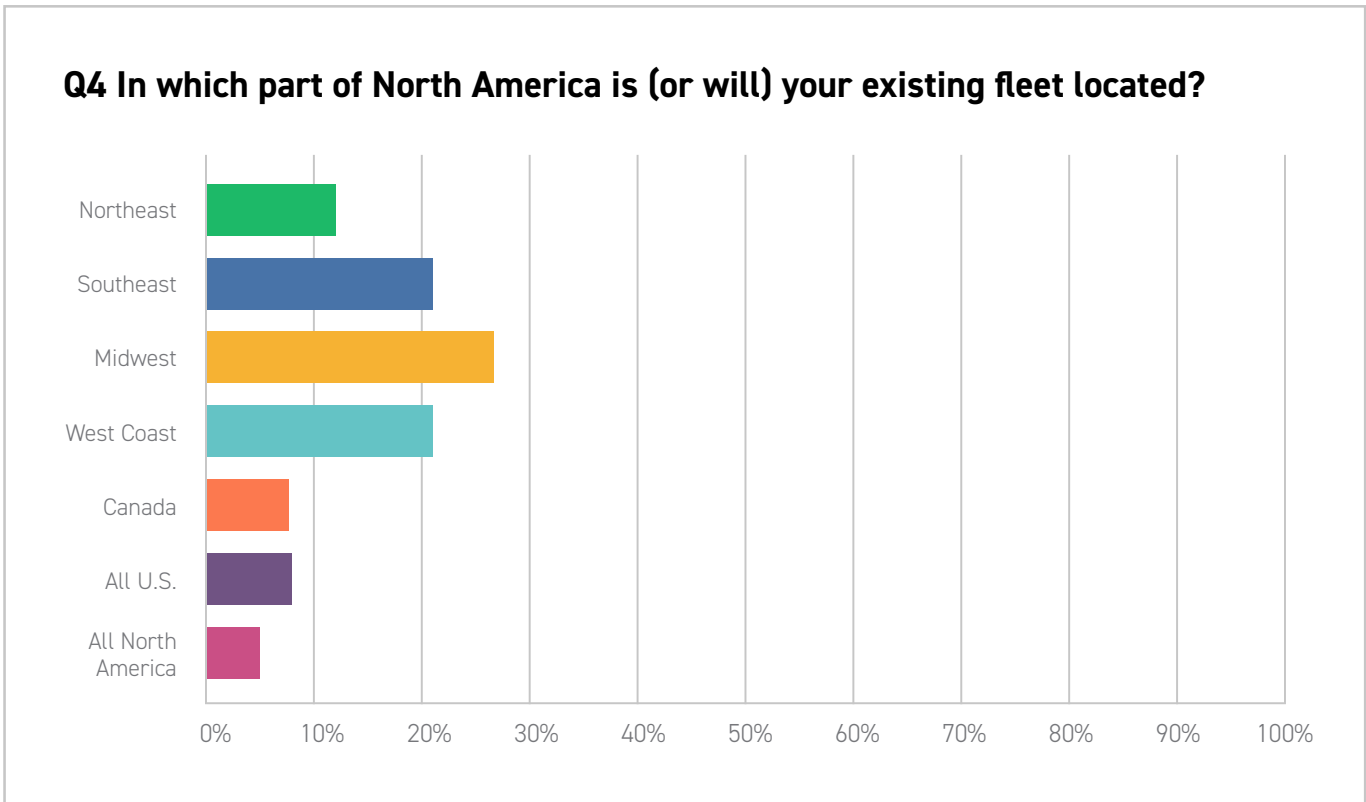
Multiple surveys reveal that electrification is also top of mind for fleet operators nationwide. Both the 2023 National Private Truck Council (NPTC) Benchmarking Survey Report and data from the North American Council on Freight Efficiency (NACFE) indicate a strong interest in fleet electrification among private fleet owners.

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Furthermore, a [November 2023 survey](#) of National Association of Fleet Administrators (NAFA) members conducted by Electrada, a Charging-as-a-Service (CaaS) provider, found that most fleets plan to pursue electric vehicle (EV) adoption over the next several years, despite some lingering concerns around vehicle availability, costs, and infrastructure challenges. To better understand the current state of fleet electrification programs, Electrada conducted a second survey in partnership with NAFA. Nearly 230 NAFA members responded to the May 2024 survey, which asked about fleet managers' approach to transitioning fleets from those with traditional internal combustion engines (ICE) to EVs.

NAFA members manage the mobility requirements of commercial, public safety, transportation, military, governments, universities and corporate entities in North America and around the world. Survey participants represented a wide variety of industries, with nearly 80% describing their primary job function as fleet management. Because NAFA members are typically responsible for acquiring, operating, maintaining, repairing and fueling their organization's fleets, and therefore managing all associated financial and operational risks, they are uniquely positioned to represent how real-world, front line fleet managers feel about the state of fleet electrification programs today.

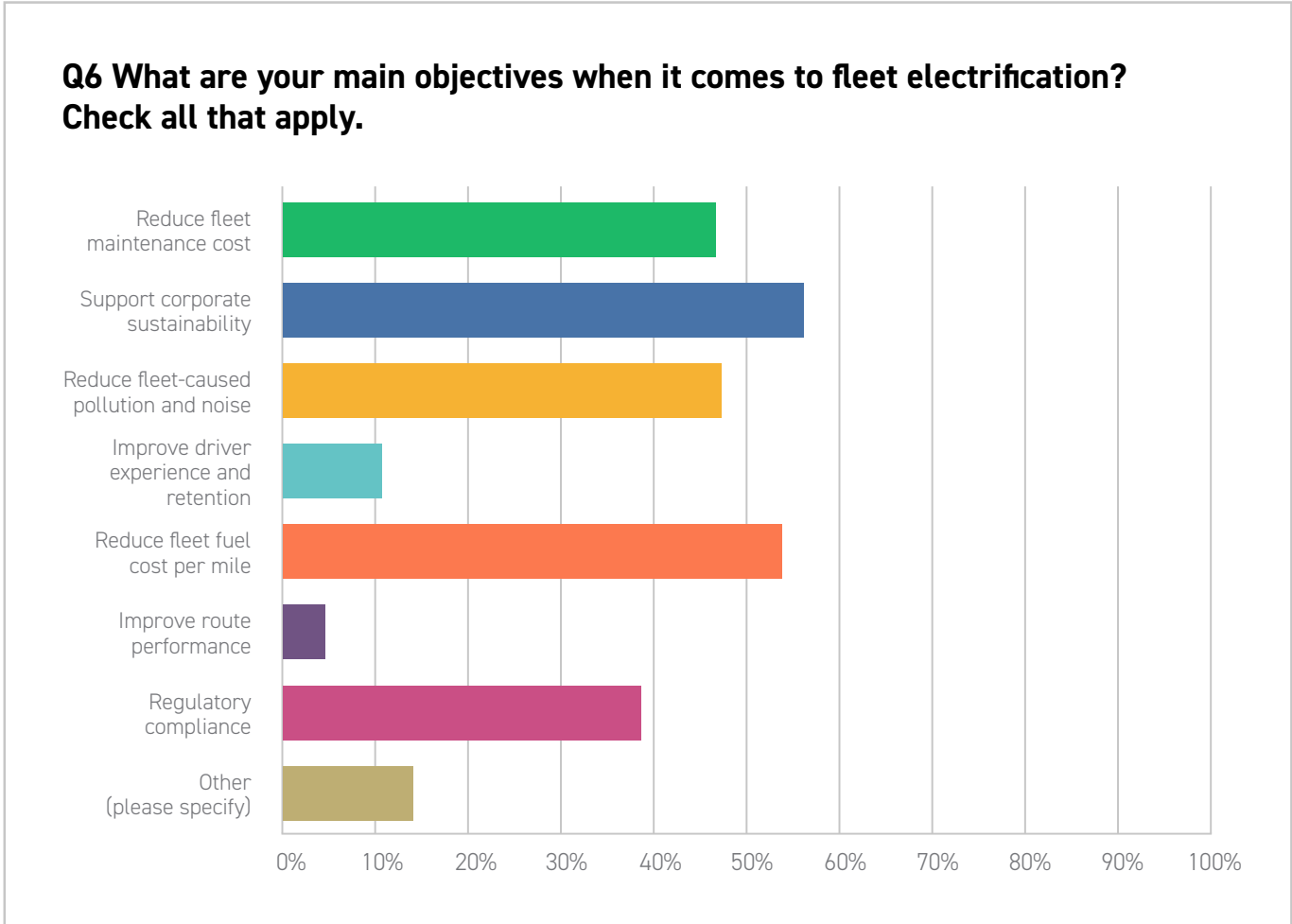
The survey revealed that over half (51.53%) of the respondents had an existing EV fleet program and that those electric fleets were well distributed across the country--contrary to popular belief, they were not just situated on the west coast where state and local regulations are driving rapid fleet electrification.



The survey results provided insights into the top objectives and concerns facing fleet managers as they advance their fleet electrification programs. The findings also illuminated how Charging-as-a-Service (CaaS) solutions are ideally positioned to support those endeavors in the most efficient and cost effective manner.

# SECTION II: Cost of EV Charging Infrastructure

Fleet managers reported several prominent objectives for their electrification programs. Achieving corporate social responsibility (CSR) goals (56.33%) was the top priority, by a slim margin. Respondents also reported they are looking to EVs to reduce fleet fuel cost per mile (53.71%), reduce community pollution and noise (47.16%) and reduce fleet maintenance costs (46.72%).



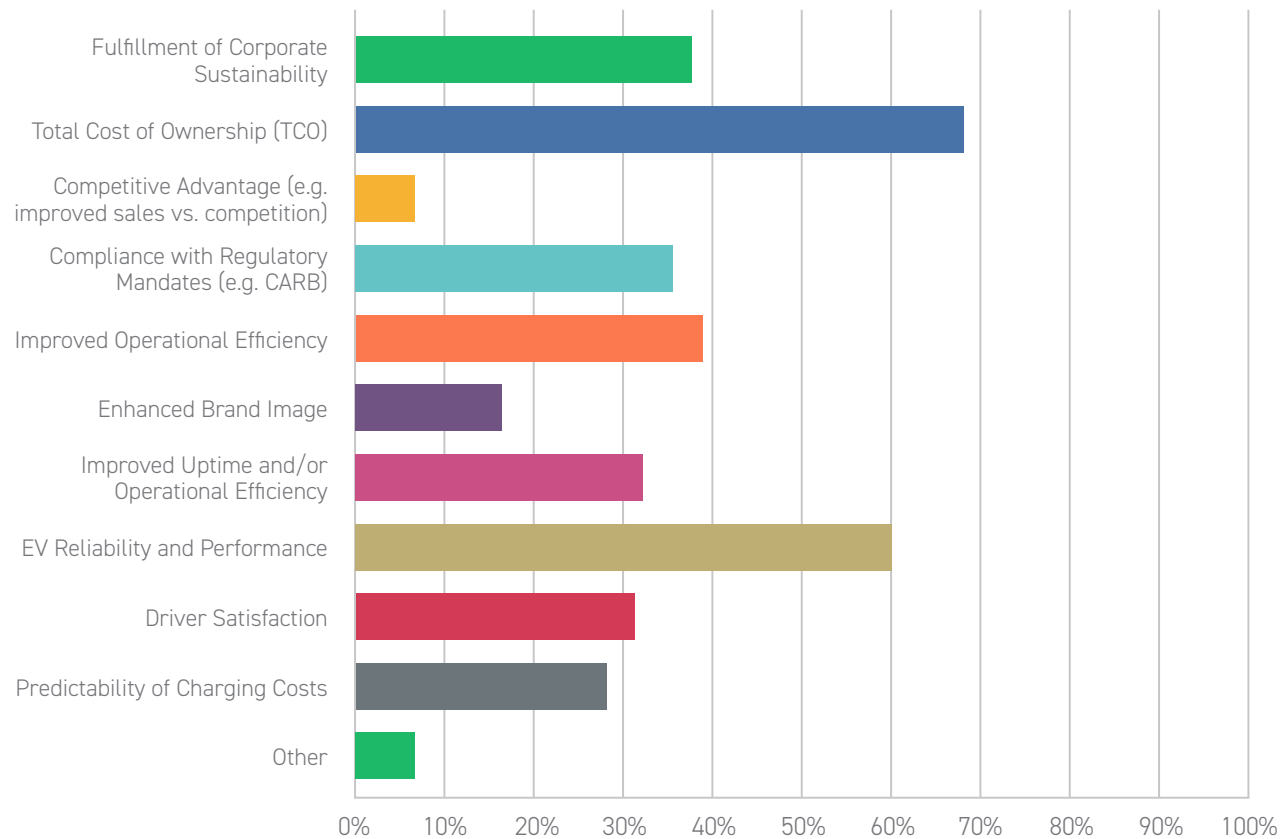
### Total Cost of Ownership

While fleet managers clearly see EVs as an avenue for achieving the goals in the chart above, the survey indicated that the costs associated with electrification are of particular concern. When asked which metrics fleet managers would use to measure the success of their EV fleet programs, **total cost of ownership (TCO)** rose to the top for 75.88% of respondents. EV reliability and performance came in second, nearly ten percentage points behind (66.67%).

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### Q8 Which metrics do you (or will you) use to measure EV fleet operational success? Check all that apply.



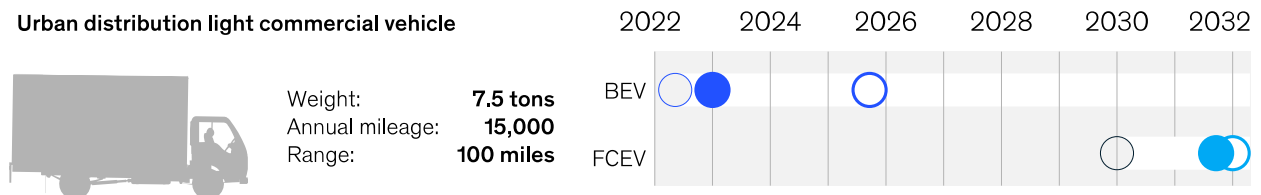
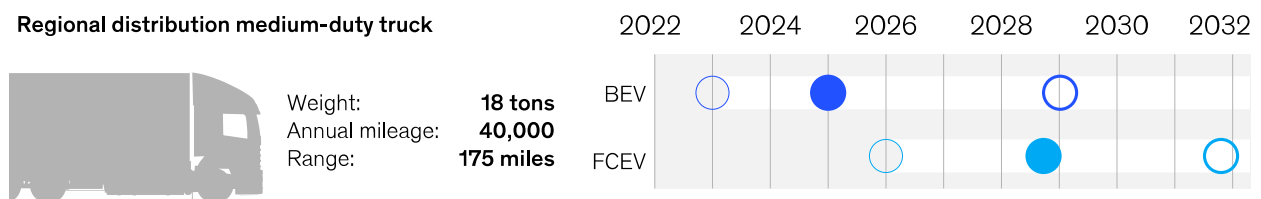
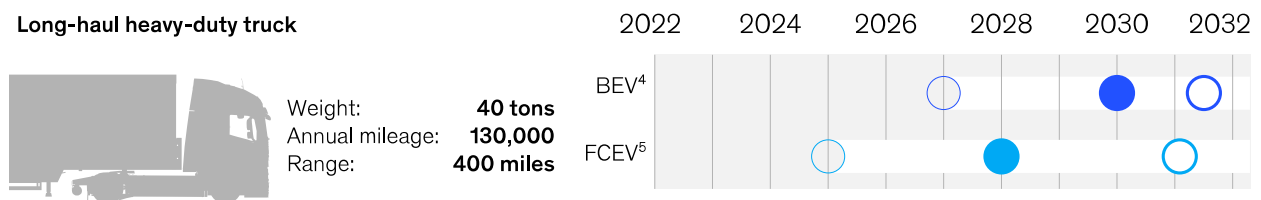
Fortunately, evolving market dynamics are driving down the cost of owning and operating electric fleets. Factors such as federal and state purchase incentives, lower fuel and maintenance costs, and [falling battery prices](#) are making even the largest EVs more affordable. In fact, McKinsey forecasts the TCO for battery electric light commercial vehicles and MD trucks will be lower than their ICE counterparts by [2025](#). They expect HD electric trucks will reach cost parity by 2030.

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## Electric trucks will gain total cost of ownership parity with internal-combustion-engine vehicles.

### Electric truck parity point with diesel trucks in the US by scenario, years

● Expected<sup>1</sup> breakeven with diesel in the US   ○ Breakeven before IRA<sup>2</sup>   ○ Breakeven with full IRA passed through<sup>3</sup>



Note: Total cost of ownership model assumes the following cost levels for heavy-duty, long-haul, line-haul trucks in Europe in 2030: up-front vehicle costs. Inflation Reduction Act partial pass-through included with \$40,000 subsidy for medium- and heavy-duty trucks and \$7,500 for light commercial vehicle, \$10/kWh passed through for batteries, and \$1/kg for hydrogen. Inflation Reduction Act. 3\$45/kWh passed through for batteries and \$3/kg for hydrogen.

\*Battery electric vehicle. Fuel cell electric vehicle.

Source: [McKinsey and Company](#)

## Charging Costs

The survey revealed that charging costs are another major consideration for fleet managers, particularly those related to charging infrastructure, a critical component of TCO calculations. More than a third of fleet managers reported charging cost predictability would be a key factor when measuring the success of their electrification program. Moreover,

over three-quarters (75.98%) of respondents said they would be monitoring the cost of EV charging infrastructure closely, as infrastructure prices would inform future EV fleet deployment plans.

It is in this arena that CaaS providers can provide a peace of mind not found with self-managed charging solutions. CaaS providers, such as [Electrada](#), work with fleet managers to design and build a [scalable charging infrastructure](#) tailored to a fleet's specific needs. Electrada's **360 Charging-as-a-Service (CaaS)** absorbs [100%](#) of the initial charging infrastructure and equipment costs — no upfront capital investment is required. Instead, 360 CaaS customers pay a predictable monthly fee that covers charging costs as well as the ongoing operation and maintenance of the charging infrastructure, which is fully managed by Electrada and contractually guaranteed to ensure 99% uptime performance.

360 CaaS offers predictable pricing models that shield fleets from volatile energy costs, insulate them from financial risk and offer long-term fixed pricing that stabilizes the organization's previously highly variable fossil fuel costs.

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Moreover, Electrada's 360 CaaS customers have access to precise electric fuel cost from the onset of the fleet electrification program thanks to the integration of powerful tools that deliver data-driven fleet intelligence that can be leveraged to optimize operations and further reduce overall costs. They allow fleet managers to make data-informed decisions when designing charging strategies that are both optimized for efficiency and vehicle readiness.

## SECTION III: Operational Efficiency is Also Important

In addition to keeping an eye on costs, the survey revealed that fleet managers expect operational efficiencies to improve with the growth of their EV fleet programs. As shown in the bar graph for Q8 in Section II, nearly 43% of respondents hoped to see improved operational efficiency, while 35.53% were aiming for better uptime and/or operational efficiency. However, approximately 65% of fleet managers expressed concerns about the reliability of charging systems and the potential impact on fleet availability.

Solutions like Electrada's 360 CaaS are well-positioned to alleviate these concerns and are designed to improve a fleet's operational efficiency, delivering a 99% uptime guarantee. Electrada can commit to such high levels of service because 360 CaaS offers comprehensive [optimization of charging facilities](#) that include everything from equipment selection to ongoing maintenance for the life of the contract.

## SECTION IV: Opportunities

Looking ahead, fleet managers are generally optimistic about the future of their electrification programs. When considering the main objectives illustrated in the bar graph for Q6 in Section II, most fleet managers reported that their EV programs

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either met or fell below expectations over the past 12 months. While this is not particularly surprising given the fact that most fleets are still early in their program evaluation cycles, 38.5% of respondents said they expected improved performance metrics in the next 12 months.

The survey revealed two main opportunities for fleet managers to consider as they expand their EV fleet programs:

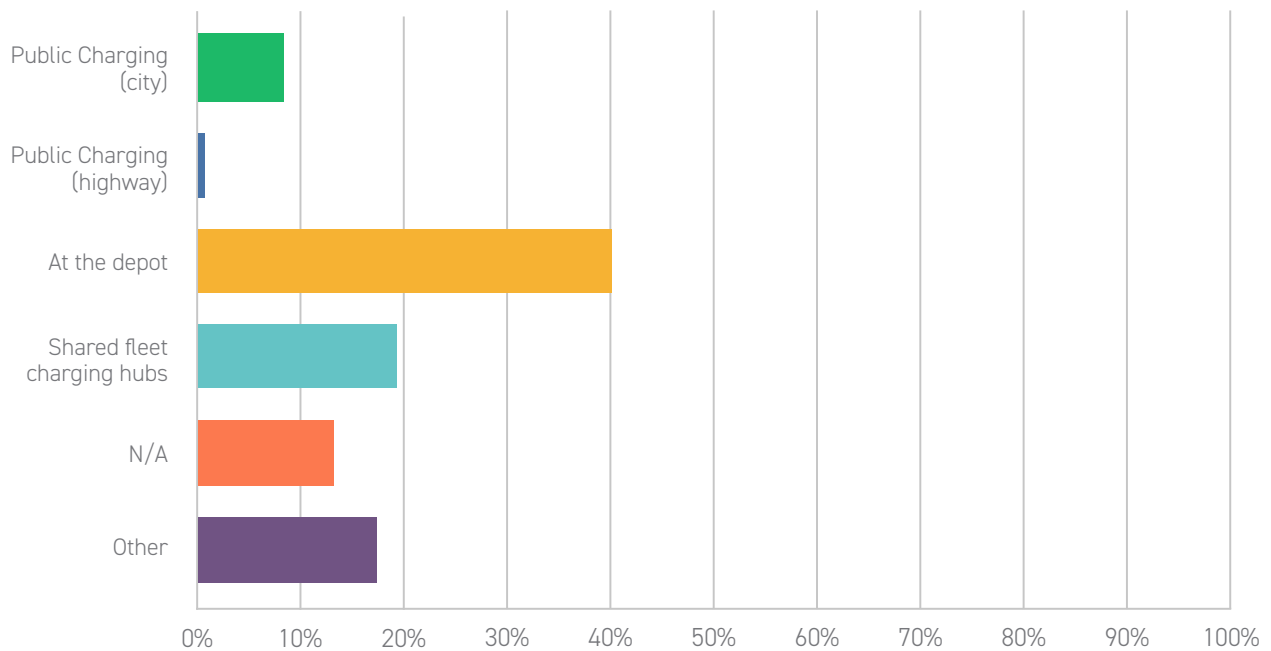
### Depot Charging

First, depot charging, a method where vehicles are charged at a central location owned or leased by the fleet's organization, is crucial for the success of fleet electrification programs, despite some fleet managers currently exploring different approaches.

According to survey findings discussed in "A White Paper on Fleet Electrification by Electrada," 83% of vehicles in classes 3-8 are primed for depot-based charging, yet nearly 60% of respondents expected to charge their fleets elsewhere. Electrada's newest survey returned similar results. Nearly 30% of NAFA respondents reported they plan to use either charging hubs or public charging for their fleets.

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### Q11 Where do you expect to charge your EV fleet most?





The challenge with relying on either multi-fleet charging hubs or public charging stations is that they are shared infrastructure, and as such may not be available when fleets need to charge their electric vehicles.

It has been widely reported in recent months that the current public charging infrastructure is not capable of supporting the influx of new electric vehicles on the road. Consider California, which is, by most accounts, the state leading the charge to increase EV adoption across all classes of vehicles. A recent study conducted by the Pew Research Center found that "despite having the most charging stations of any state, California's [43,780 individual public charging ports](#) must provide service for the more than 1.2 million electric vehicles registered to its residents. That works out to one public port for every 29 EVs, a ratio that ranks California 49th across all 50 states and the District of Columbia."

Clearly, given the significant gap between public charging station supply and demand, fleets will not be able to rely on shared infrastructure and still meet their goals of improved operational efficiency and increased uptime. That reliability can only be delivered by a fully integrated CaaS-driven depot charging solution that's tailored to and reserved specifically for an organization's fleet.

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## Stakeholder Engagement

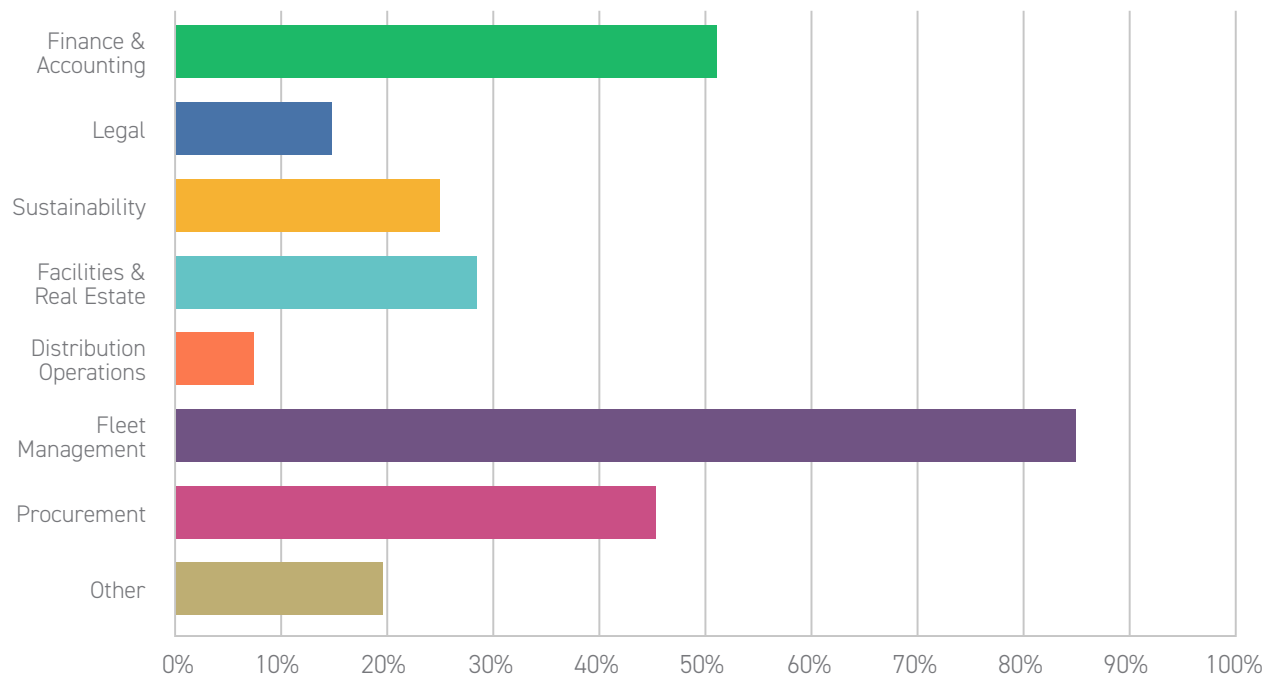
The second opportunity revealed by the survey revolves around stakeholder engagement — specifically ensuring that the right players are involved in the fleet electrification process at the right time.

While the NAFA fleet managers surveyed reported their department was the key internal stakeholder, they also indicated they were not solely responsible for the success and development of fleet electrification programs. Like any major capital project, [multiple stakeholders](#) are impacted by fleet electrification, so early engagement with these constituents to get their buy-in and address their concerns can eliminate time-consuming and costly delays down the road.

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To ensure future success and adoption of EV programs, the right people need to be identified early in the fleet electrification process. The survey revealed common stakeholders include those in finance and accounting, procurement, facilities and real estate, sustainability, legal, distribution operations, and more. Senior leadership and the board of directors may also need to be involved.

### Q5 Who are the key internal stakeholders inside your organization that need to approve an EV purchase / lease and/or investments in EV charging infrastructure? Check all that apply.



Working with a CaaS solutions provider can help all constituents understand the streamlined, reliable, and cost-effective nature of a solution like [Electrada's 360 CaaS](#).

## SECTION V: Final Thoughts

Although widespread EV fleet programs are still in their early stages of development, the outlook is promising. As this survey revealed, fleet managers are optimistic about the future, especially when it comes to the improved operational efficiencies delivered by EVs. Electrification costs and infrastructure reliability are among the top concerns for fleet managers;

*As this survey revealed, fleet managers are optimistic about the future, especially when it comes to the improved operational efficiencies delivered by EVs. Electrification costs and infrastructure reliability are among the top concerns for fleet managers; however, these apprehensions strengthen the case for partnering with a Charging-as-a-Service solutions provider like Electrada that can provide a 99% uptime guarantee, predictable pricing for a 5-year term (or longer), and industry-leading service level agreements that cover the ongoing 24/7/365 operation and maintenance of charging infrastructure.*

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Want to get an accurate estimate of your fleet's electric fuel cost per mile in less than 60 seconds?

Try Electrada's [Rate Calculator](#).



Want to chat with one of our experts?

[Get in touch](#) to learn how 360 CaaS can accelerate your fleet electrification journey.