FROST & SULLIVAN

# Charging Ahead With Advanced Payment Solutions

FROST & SULLIVAN WHITEPAPER

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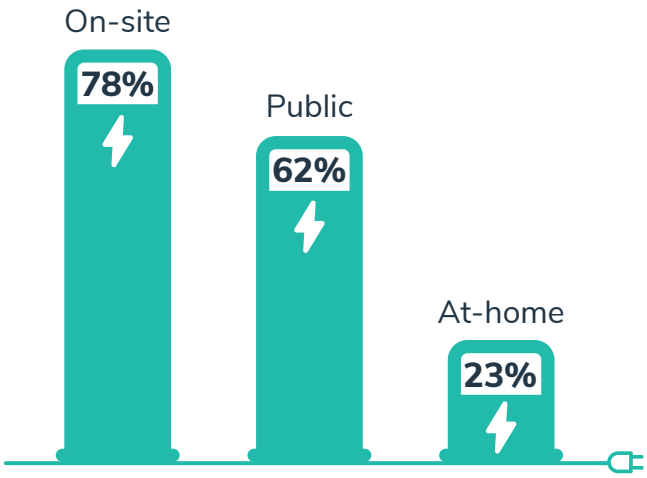
# Introduction

As businesses strive to meet sustainability goals, commercial fleets are increasingly turning to electric vehicles (EVs) as low carbon alternatives to internal combustion engine (ICE) vehicles.

In 2024, Frost & Sullivan interviewed over 500 businesses with mixed EV/ICE fleets across Europe, the US, Australia, and New Zealand about their journey toward electrification.

FIGURE 3: Where Fleets Charge




*Note, figure equals more than 100% due to organizations using multiple charging options.*

Our research showed that charging infrastructure buildout and payment systems are deeply interdependent in the fleet electrification journey. Choices around deploying depot chargers versus relying on public networks can shape EV acquisition strategies. Frost & Sullivan's research found that a substantial proportion (78%) of mixed-fleet organizations have charging on-site, though charging on-route and at home were also popular (Figure3).

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Any time an organization makes a significant investment in new equipment, costs will be an important consideration, and EVs are no different. While electric charging is considered less expensive and more stable than fueling with petroleum products, it is still a considerable proportion of a government's or business's operational expenses when managing a fleet of commercial vehicles.

The two most common ways fleets said they controlled charging costs were leveraging low-rate periods (the leading method was to charge EVs during off-peak hours, such as overnight) and charging separate energy storage batteries during off-peak times (which could then be used to charge EVs at any time without incurring peak costs).

The third most cited cost reduction tactic was implementing monitoring and analytics tools tracking energy consumption. Visibility into usage patterns and energy workflows enabled fleet operators to identify inefficiencies and optimization opportunities. With granular insights into when, where, and how electricity is being consumed across their mixed-energy fleet and facilities, operators can pinpoint areas of waste and take corrective measures. Continuous monitoring and advanced analytics also provide insights for continual improvement and cost reduction over time.

Other cost-reduction methods included generating renewable power onsite, such as with solar panels, and implementing energy efficiency measures across the charging infrastructure.

## Conquering charging challenges

The cost and availability of charging options impact how quickly businesses can transition to EVs. The research confirmed that onsite charging depots and associated energy management systems can carry significant upfront capital expenditure, but also provide users with better control over energy use and, thus, operating expenses. This is especially true when incorporating onsite renewable power sources. Company charging stations can also be configured to capture and deliver critical operational data to further optimize running costs.

To allow flexibility in fleet charging locations, especially as a business grows, many companies will use a combination of onsite, public, and at-home charging. Access to a wide network of charging stations across multiple locations was reported by 77% of respondents as the leading benefit. The use of shared public charging stations and home charging also shifts CapEx to

> "Long wait times" was the main pain point ascribed to en-route charging. Moreover, public networks may not seamlessly integrate with fleet management platforms, impeding real-time visibility and control for effective fleet management.

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OpEx. Cost savings and convenience were the most cited benefits for home charging, cited by 67% and 66% of respondents, respectively.

However, these options are not without challenges. Accessing public chargers can impact driver time-on-job compared to the efficiency and convenience of in-house stations.

While at-home charging presented cost-saving opportunities, the most common barrier cited was the difficulty in accurately reimbursing drivers for charging expenses. Manual tracking may be prone to inaccuracies, can be laborious for the driver, and can be an administrative burden for the business. Integrated payment systems that seamlessly connect with fleet management platforms can help streamline and automate this process. By implementing advanced payment and charging solutions that can integrate onsite, en-route, and home charging, fleets can reimburse drivers for charging costs more accurately and with less effort for both the driver and the business.

## Technologies that enable EV transition, business growth

In adopting a mixed-energy or predominately EV fleet, a business must consider its growth trajectory. Can the business afford onsite charging stations and keep pace with the growth of operations and fleet size? Will public infrastructure expand quickly enough to reduce wait times across all necessary geographies? Can home charging provide convenience without administrative burden?

Businesses and governments need solutions that can transcend these challenges, providing fleet managers with a comprehensive view of operations and billing that encompass ICE vehicles and EVs and that facilitate the right charging options for each situation a driver may face.


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Payment decisions involve upfront costs, driver convenience, flexibility and vehicle location at the time of charge. Frictionless payment is crucial to optimize charging utilization and keep drivers and administrators productive. Ideally, such solutions can provide quick wins for fast ROI as well as future-proofing innovations that can evolve with the business' needs.

Corporate fuel cards were the most common, reported by 65% of survey respondents, though company credit cards were also used by 40% of businesses. Apps, such as mobile wallets or charging network apps, were also employed by a quarter of the respondents.

## Payment Platform Options

Businesses with commercial vehicles are familiar with the benefits of fuel cards and related solutions that streamline charging options, driver expense reimbursement, and keeping costs down through bulk purchases: a full 90% of survey respondents use the same payment options for their EVs and ICE vehicles.

While the number of public EV charging locations is expanding rapidly, charging infrastructure struggles to match the convenience and ubiquity of ICE fueling stations and payment options. Governments and private organizations are helping expand public charging infrastructure, but this can lead to a patchwork of charging system owners and operators and payment methods. Diverse power grid models worldwide add complexity, especially for businesses with fleets across multiple geographies. Governance and ownership structures impact electricity availability, directly affecting fleet charging feasibility. State-controlled or privatized grids, utilizing centralized or decentralized models, can all shape the charging ecosystem and create unwanted complexity without external support.

Efficiently charging vehicles under tight delivery schedules can be challenging due to the current charging landscape and intricate power grid structures. Streamlined payment systems are crucial to navigating the array of platforms and standards, preventing unnecessary friction. Continuous monitoring of ongoing EV charging infrastructure developments and power grid models is essential, as the information provided is continuously evolving. Given these charging considerations, streamlined payment and billing systems will help businesses avoid disruption. A multitude of platforms and standards industry-wide make this difficult.

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## Centralized Solutions

Carrying multiple access cards or RFIDs—or juggling apps and fuel cards—adds undue complexity to a driver's and a fleet manager's workday. On average, 41% of businesses use multiple brands of charge cards across their mixed-energy fleets. The proportion of multi-vendor users increases to 61% for "very large" fleets (those with 500 or more vehicles). The main benefits of using multiple brands' cards were cost savings and the need to access diverse charging and fueling networks. Cost savings, however, was also a reason 59% of fleets use a single vendor, second only to the benefit of consolidated expense tracking. Regardless of whether a company used a single or multiple vendor system, the ability to use a card "anywhere" and specifically across fueling and charging stations were the main factors in determining which card(s) to use.


Advanced payments allow one card or app to access nearly any public station for mixed-energy fleets, but they can do more as well: these solutions streamline charging expenses, offer easy reimbursements for home charging, and provide insights for efficient energy management. Fleet managers gain visibility into charging patterns and cost optimization opportunities, helping minimize expenses and maximize returns on electrification investments.

Behind the scenes, payments are routed to the appropriate charging network, but to the driver, charging requires just a single card swipe regardless of the station operator. For administrators, all charging events are aggregated for transparent per-vehicle and total energy cost reporting. In essence, universal fleet charging platforms act as clearinghouses between the major charging networks.

For example, in Europe, Chargetrip routes millions of vehicles monthly to selected charging stations. The result is that drivers will pay less on average for using a preferred operator, and the operator increases the utilization of their station significantly. This collaborative approach benefits the driver, charge point operator,

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fuel card provider, and the business owning and operating the commercial vehicles.

### Future-proofing payments

Tailored payment systems facilitate the management of mixed-energy fleets and transition to EVs, ensuring billing processes are transparent and scalable. By removing the payment friction of multiple access methods, charging utilization is optimized for use across depot, home, and public sites. Robust payment platforms consolidate costs and reimbursements into a cohesive system, providing insights into energy usage patterns and optimization opportunities. A streamlined driver experience coupled with back-end analytics, empowered by smart payment systems, can give fleets a marketplace advantage. With a strategic approach to payment integration, fleets can elevate their electrification initiatives into a competitive advantage.

For more in-depth insights and analysis, download the full white paper here.

# About the survey

*Frost & Sullivan interviewed 503 decision-makers at businesses with mixed EV and ICE fleets in 2024. The regional split for these interviews was as follows: France, 65 respondents; Germany, 60 respondents; Italy, 65 respondents; UK, 61 respondents; Benelux, 22 respondents; United States, 105 respondents; Australia, 60 respondents; New Zealand, 60. Fleet size definitions and corresponding respondents were: Very small fleets 2-4 vehicles, 101 respondents; small fleets 5-49 vehicles, 114 respondents; medium fleets 50-99 vehicles, 116 respondents; large fleets 100-499 vehicles, 115; very large fleets, 500 vehicles or more, 57 respondents.*

*Data referenced in this paper is based on the Frost & Sullivan survey unless otherwise stated and does not claim to represent the entire fleet user population. Percentages may not always total 100% due to rounding. The interpretations and conclusions drawn are those of the authors representing Frost & Sullivan and do not necessarily reflect the views of WEX, the respondents of the survey, or their organizations.*

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