

How to start planning for your fleet's EV charging solutions



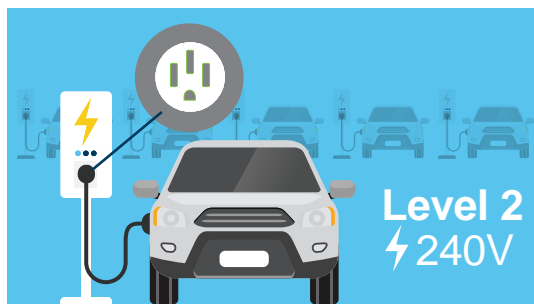
Understand the 3 categories of EV chargers and how they are best used



Level 1
⚡ 120V

Level 1 chargers are included with almost all plug-in hybrid electric vehicle (PHEV) and battery electric vehicle (BEV) purchases. These portable chargers can be plugged into any existing 120V outlet.

Fleet use: Level 1 charging is well-suited for a light-duty PHEV's smaller battery and BEVs with routine commutes under 50 miles per day. Most fleet vehicles have more variable and greater range requirements which would be better supported by Level 2 chargers.



Level 2
⚡ 240V

Level 2 chargers are supplied by charging vendors and some EV OEMs. Level 2 chargers can be plugged in like Level 1 chargers, or fixed wall / bollard installations in your residence, workplace, or public space.

Fleet use: Level 2 are the most common and versatile chargers with applications across the 4 fleet charging scenarios for light- and some medium-duty vehicles and are most cost-effective for drivers that can park their vehicles for 8+ hours of downtime.



Level 3 (DCFC)
⚡ 480V

Direct current fast chargers (DCFC) chargers are supplied by charging vendors primarily for private depots or public networks. These chargers are built as stations, requiring power levels unavailable for homes and some workplaces.

Fleet use: DCFCs are well-suited for short-dwell charging when a vehicle needs to charge in 30-50 minutes. DCFC charging is best suited and used primarily for medium- and heavy-duty truck use cases.

Match your fleet vehicles to the best-fit charging solution



Home Solution

Home charging is the most convenient charging and cheapest "fuel" solution for your drivers but requires an upfront installation at each residence. Element can help support charger selection and facilitate installation, as well as provide fuel reimbursement solutions.

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Likely speed of home charging:*



Level 1
3-5 miles of range per hour of charge



Level 2
20-35 miles of range per hour of charge



Depot Solution

Explore effective depot solutions for your on-site vehicles.

Medium- and heavy-duty vehicle electrification planning is accelerating, and most organizations will need a charging solution customized to their depot/storage facility network. Companies exploring depot fleet cases will want to closely analyze the likely charging requirements and consider peak use periods and demand charges. Power management solutions will be essential to avoid unnecessary costs. Element can help you develop best-in-class solutions to successfully electrify your fleet and manage your costs.

Likely speed of workplace charging:*



Level 2
20-60** miles of range per hour of charge



DCFC
60-250** minutes of charge



Workplace Solution

Ideal for your drivers that commute into the office and where they will have longer dwell times. Planning for upgrades in leased vs. owned properties adds to the complexity of workplace charging. Element can help develop the right charging solution for both owned and leased properties as well as identify the right energy management practices for success.

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Public Solution

Public charging is the most expensive "fueling" solution in most cases for EVs. Element can support leveraging existing fuel-card processes with charging networks and help you build solutions that balance the use of public charging with other charging options.

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Likely speed of public charging:*



Level 2
20-60** miles of range per hour of charge



DCFC
60-250** minutes of charge

Depot solutions are significantly more challenging than other charging scenarios due to factors like:

1. Site design
2. Charging load & power demand analysis
3. Utility partner planning
4. Permitting and approvals
5. Utility distribution upgrades
6. Construction

Element is positioned to help you navigate the complexity of designing and rolling out this infrastructure.

Contact Element for Fleet & Charging analysis support:
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*The speed of charging is variable, depending on the charger model, size of the EV battery, and the EV model.

**Workplace and public Level 2 and DCFC chargers can deploy load sharing and managed charging scenarios that can lower the range per hour of charge to below the ranges illustrated here.