



The 2024 Fleet  
Manager's Guide to  
Home Charging Setup  
and Reimbursement  
for Electric Vehicles



# Hello!

At MoveEV, our mission is to accelerate electric vehicles (EVs) adoption. The shift to EVs represents a substantial change in both environmental stewardship and fleet management practices. We've crafted this white paper as a guide to help your organization navigate the critical aspects of integrating EVs into your take-home fleet – from selecting program participants and establishing home charging solutions to setting up a fair and accurate reimbursement program for home electricity use. Drawing from our experience with leading national fleets, we provide insights tailored to real-world applications. However, we also recognize that each organization is unique. This resource is not about one-size-fits-all solutions but about sparking informed discussions to help you customize the right EV home-charging program for your company. We hope this guide acts as a compass as you steer your organization to a greener future.

*~The MoveEV Team*

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# Background

WHEN FLEET DRIVERS TAKE ELECTRIC VEHICLES HOME TO CHARGE, YOUR ORGANIZATION FACES A NEW SET OF CHALLENGES AND OPPORTUNITIES

Incorporating electric vehicles (EVs) into your fleet is an effective strategy for reducing costs and contributing to your organization's efforts in lowering carbon emissions. A significant difference from traditional internal combustion engine (ICE) vehicles is that light-duty EVs can be charged at the homes of your employees. This shift requires a novel approach, viewing each employee's home as a potential part of your charging infrastructure. Adapting to this change calls for new policies and practices to ensure the smooth operation of your fleet program.

While there's no singular "correct" method for managing an EV take-home fleet, the fundamental considerations remain consistent across fleets of all sizes. This white paper aims to guide you through some of the most crucial questions and decisions you'll face in this process. These include deciding who gets to use these cars, if your company should install chargers at employees' homes, and the best way to calculate and pay back employees for the electricity they use to charge the vehicles at home.

## Three reasons to encourage home charging



### Reliability

1 in 5 drivers using public charging stations have trouble charging.



### Efficiency

2-10 hours of employee time is lost to charging on-the-go.



### Cost Saving

Charging costs 2x to 3x more than charging at home.

# Driver Selection

A ONE-SIZE-FITS-ALL APPROACH TO DRIVER SELECTION DOES NOT ALWAYS YIELD THE BEST OUTCOMES

Tailoring your EV allocation based on specific criteria ensures a more efficient and successful integration of EVs into your fleet. Some of the key considerations for selecting the right drivers for your EV take-home program include:

## 1 Job-Vehicle Compatibility

A crucial aspect to consider is the compatibility between the employee's job requirements and the vehicle's capabilities, particularly its range. Assess the daily driving distance of potential candidates and compare it with the range of the EV models available in your fleet. The goal is to minimize or eliminate the need for public charging during the day. If an employee's daily driving distance significantly exceeds the EV's range, requiring multiple charges per day, they might not be the ideal candidate for an EV, considering the time and logistics involved in public charging.



**Don't forget to factor in range loss from towing and climate in your calculations. A vehicle that may work well for an employee in May might be difficult in January when range can fall by 40%.**

## 2 Residential Charging Feasibility

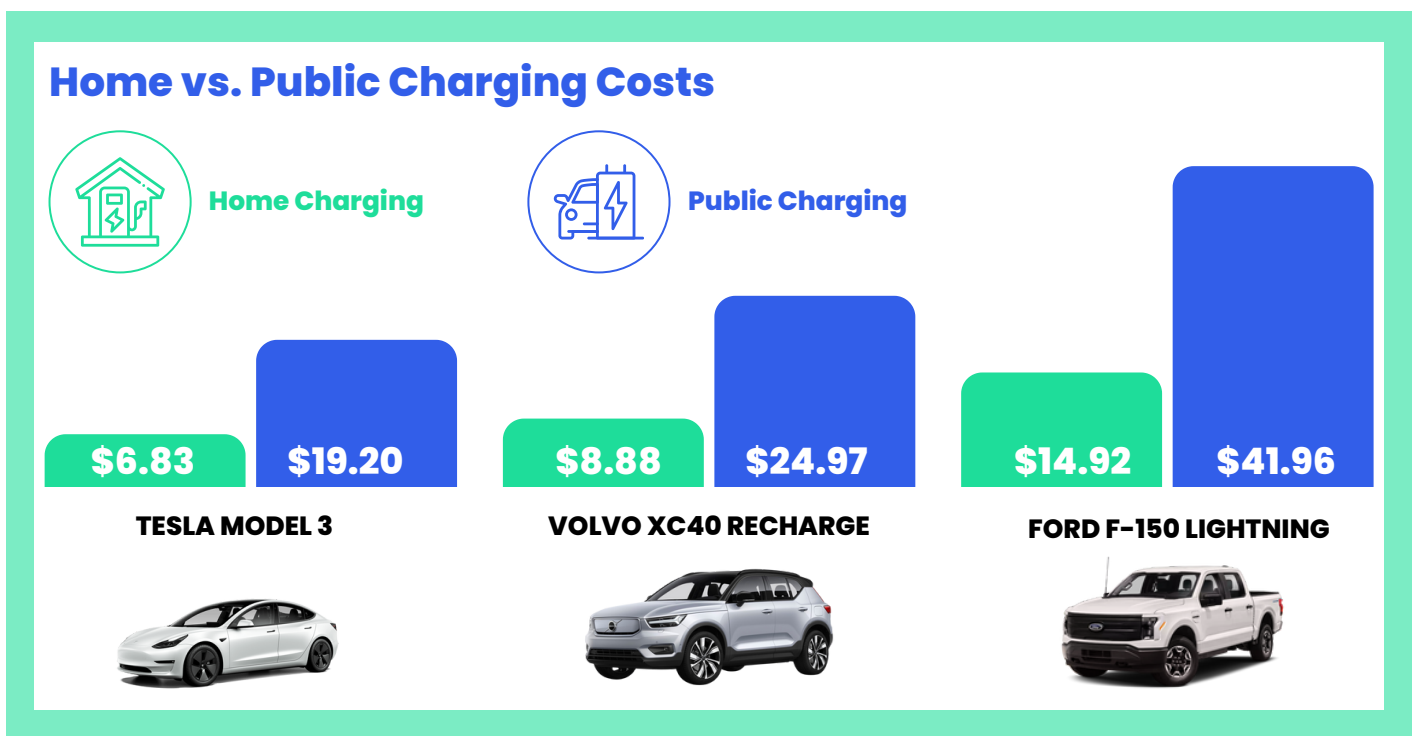
The current residential setup of employees is a primary factor in determining their suitability for an EV. Generally, individuals residing in single-family homes have a distinct advantage if installing home charging stations, even if they're renting. While Level 2 charging is not always required, the ease of adding home charging infrastructure should be a major criterion in the selection process. Consider conducting a survey or a home assessment to gauge the feasibility of installing charging stations at employees' residences as part of your process.

### 3 Driving Patterns and Lifestyle

Beyond the basic compatibility and residential setup, you will want to consider the driver's typical driving patterns and lifestyle. For instance, employees who do not frequently go on long-distance trips for work may find EVs more practical. Also, consider the availability of public charging stations along their regular routes and any potential impact charging will have on their routine. Employees with predictable driving patterns within the EV's range are typically better candidates for adoption.

### 4 Employee Engagement

Evaluating employee interest in sustainability and electric vehicles is key to understanding their readiness for an EV. Enthusiastic employees are often more cooperative in overcoming challenges, such as adapting to new charging routines. Even those in less than ideal charging situations can be great fits for your program if their commitment is strong. For example, an employee in a multi-tenant building without a charger might be open to using a nearby supermarket's free charging station regularly. This flexibility is why having a rigid policy isn't always the best path; willingness and adaptability can be just as important as the physical charging setup.



# Home Chargers

## GOOD TAKE-HOME PROGRAMS BALANCE EFFICIENCY, COST, AND EMPLOYEE CONVENIENCE IN EV CHARGING










Many fleet managers find the prospect of installing charging equipment at employee homes across various locations, property types, and geographies daunting. What at first seemed straight forward can soon turn into hours of research and internal deliberations about technical requirements, cost, potential liability, and logistics. A strategic approach will facilitate smooth integration of EVs, meeting both company goals and employee needs.

### Question 1: Which Level (1 or 2)?

While every employee may want a new charger at their home, they may not need one. Level 1 chargers, plugging into 120V outlets, recharge at approximately 4 mph. Level 2 chargers use 240V, charging faster at 15-30 mph. The first step is assessing who in your fleet really need Level 2 chargers, considering daily usage and EV battery capacities. Although faster, Level 2s require new hardware as well as complex and often expensive installation. If not needed, your organization does not have to provide a Level 2 to start sending an EV home to charge.

#### Who needs a Level 2?

Many fleet managers over-estimate their drivers' real charging needs. Fleet drivers with 250 miles of range going less than 70 miles a day on average may be able to charge comfortably with a simple level 1 (trickle charger). This can reduce setup time and costs significantly.

		 MORNING TOTAL	 NIGHT TOTAL	 OVERNIGHT CHARGE
MONDAY	 <b>250</b> MILES	 <b>180</b> MILES	 <b>+40</b> MILES	
TUESDAY	 <b>220</b> MILES	 <b>150</b> MILES	 <b>+40</b> MILES	
WEDNESDAY	 <b>190</b> MILES	 <b>120</b> MILES	 <b>+40</b> MILES	
THURSDAY	 <b>160</b> MILES	 <b>90</b> MILES	 <b>+40</b> MILES	
FRIDAY	 <b>130</b> MILES	 <b>60</b> MILES	 <b>250</b> MILES <b>WEEKEND CHARGE</b>	

## Question 2: Smart or Non-Networked?

For employees requiring Level 2 chargers, decide on the necessary functionality. "Smart" Level 2 chargers provide remote management and integration features, beneficial for enhanced control and monitoring. Alternatively, non-networked chargers are more cost-effective, lacking advanced features but still delivering faster charging capability. For many fleets, using vehicle-level scheduling and apps like reimburseEV can mitigate the need for smarter hardware entirely, allowing fleet managers to cut thousands of dollars from the take-home fleet management budget.

## Question 3: Pay or Reimburse For Chargers?

When financing home-based chargers, organizations have three options: company-funded, employee-funded, or a shared cost model. Choosing to reimburse employees instead of owning the chargers directly is a quick way to cut costs as they can take advantage of the many discount and incentive programs available for home owners and renters (e.g., the Federal EV Charger Tax Credit reimburses individuals for 30% of installation costs up to \$1,000). Many states, municipalities and utilities also offer incentives to residents. By structuring the reimbursement as a reimbursed benefit, companies not only reduce overhead, but may mitigate the liability associated with owning an asset inside employee's residence.

## Four Reasons to Avoid Company-Owned Networked "Smart" Chargers



- 1 Increased Liability Risk:** Owning the charging infrastructure introduces liability concerns, especially regarding data security.
- 2 Connectivity and Compatibility Issues:** Networked chargers can suffer from connectivity issues, leading to inaccurate charging data.
- 3 Risk of Fraud:** Many smart chargers do not know which vehicle is plugged in, and risk being used by non-fleet vehicles.
- 4 Brand Lock-In:** A number of networked chargers are tied to specific OEM brands, limiting the flexibility in future vehicle selection.

# Reimbursement

A FAIR, TRANSPARENT, AND EFFICIENT ELECTRICITY REIMBURSEMENT PROGRAM IS ESSENTIAL FOR YOUR PROGRAM'S SUCCESS

While often an afterthought in the EV take-home planning process, the importance of a easy, accurate, and transparent home charging reimbursement program cannot be overstated.

## A good home charging reimbursement program:



Saves you and your employees money on taxes



Cuts your electricity costs by upto 60%



Saves hours of valuable administrative time



Is both accurate and easily audible



Provides IRS- and CRA- compliant receipts

## Actual expense is the only safe choice

Some fleets consider using flat fees or estimated rates to calculate payments, but “actual cost” reimbursement is the only way for companies to clearly meets IRS and specific state requirements (like California's CA 2802) while removing the risk of over- and under- compensation.



### Flat Allowance

- Legal risk of under-compensation
- Disincentivizes charging at home
- Taxed as income**
  - Company (7%)
  - Employee (25%-35%)
  - =\$10-\$15 tax/month



### Geographic Average Rates

- Not taxed
- No IRS rate yet
- Legal risk of under-compensation
- Viewed as unfair by employees



### Actual Expense

- Not taxed
- IRS compliant
- Accurate
- Fair & defensible
- Happy employees

WORST

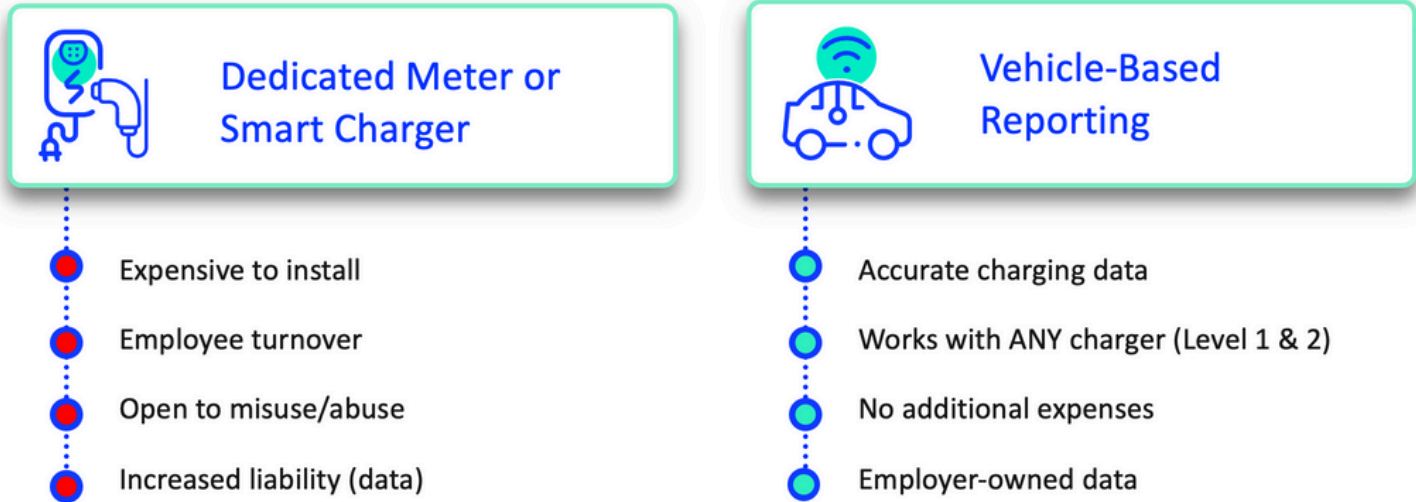
Bad

BEST



# How many kWh did the vehicle use?

The first question that must be answered when calculating what an employee is owed is how much of their home electricity “fueled” your company’s fleet vehicle(s). This data can be obtained from a “Smart” charger or from the vehicle itself. Either option can provide the data needed to run an accurate reimbursement calculation, but additional considerations make vehicle-based collection the best choice.



# What did the energy cost?

Calculating a fair kilowatt-hour (kWh) reimbursement rate for electric vehicle (EV) charging can be complex due to the various charges on an electricity bill. To determine an equitable rate, companies must accurately account for all of the following:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Energy Charges (kWh Usage) | <input checked="" type="checkbox"/> Taxes & Government Fees |
| <input checked="" type="checkbox"/> Time-of-Use Rates          | <input type="checkbox"/> Fixed Monthly Charges              |
| <input checked="" type="checkbox"/> Tiered Rates               | <input type="checkbox"/> Late Fees or Other Penalties       |



Renewable Energy Program Fees and Net Metering (Solar, Wind, etc.), though not required, should be factored into reimbursements to encourage greener choices and align with company sustainability goals.

# Avoid “average” rate shortcuts

Well-intentioned fleet managers often make errors when calculating home charging reimbursement amounts due to the complexities of American electric bills. Certain types of bills, such as tier rate plans and time of use plans can be particularly tricky. While it can be tempting to use an average kWh approach as a short cut, this method can create inaccurate and unfair results.

For a detailed breakdown of how easy it is to accidentally over- or under- reimburse for home charging costs, we recommend reading a Fleet Managers’s Guide to Common and Costly Home Charging Calculations Errors by MoveEV Co-Founder, Kate Harrison, in Charged Fleet magazine online. As that article demonstrates, one error can snowball into hundreds of dollars worth of mistakes each year per driver resulting in economic waste, driver dissatisfaction, and potential liability.



## Fleet Manager's Guide to Common and Costly Home Charging Calculation Errors

April 2, 2024 • By Kate Harrison, MoveEV • □



Accurately reimbursing employees for their home-charging costs is vital to avoid over- and under-payments, employee dissatisfaction, and legal hassles.

Photo: Ford



**"Reimbursement should be simple, but it's far from it. It was taking me over an hour per employee. We needed a solution that made it simple and could scale with us. That was ReimburseEV."** – *Ernie Garcia, Gothic Landscape*

## Software for the win

In navigating the potential pitfalls, the role of an accurate home charging reimbursement software solution cannot be overstated. Such technology automates the reimbursement calculation process, ensuring precision by considering the myriad factors that influence electricity costs, including tiered rates, time-of-use variations, solar generation, taxes, fees, and subsidies.

# Reimburse Employees for Electric Vehicle (EV) Charging at Home

Having fleet drivers in EVs is better for the planet and saves your organization money on gas and maintenance. When employees charge at home instead of at work or on-the-go your company can **save an additional 30%-60% on electricity costs**. Plus, the convenience of charging overnight saves your employees valuable time. Encourage the behavior you want by covering **the real costs of charging fleet vehicles at home with ReimburseEV™**.



## Reimbursing For Charging-At-Home Is Simple!

MoveEV's proprietary ReimburseEV™ at-home charging reimbursement software was designed by a team of mobility experts to make reimbursing employees for their real electricity use simple, accurate, and compliant.

### Fast Setup



With just a few clicks, employees can set up their account and start getting reimbursed.

### Convenient Admin Portal



Manage all claims from one dashboard, making year-end reporting a breeze.

### One-Click Upload



Each month employees upload their utility bill with a single click. That's it! We take care of the rest.

### IRS & CRA Compliant Receipts



Employees can view or download MoveEV generated receipts any time.

### No Hardware Needed



No 3rd-party products needed, but ReimburseEV™ integrates with Concur and Geotab. Custom integrations are also available.

### Real-Use Calculations



Using accurate home electricity use and geographic-specific data, our secure software calculates the appropriate monthly reimbursement for each employee.

SAP Concur GEOTAB

## ReimburseEV™ Receipt Sample

**reimburseEV** ACME, Inc.

Fleet EV Home Charging Reimbursement Receipt

Account ID: ACME-A12345678 Receipt Date: May 15, 2023

Utility Billing Period: 03/21/2023 to 04/21/2023 Receipt ID: ACME-R1234567890

Receipt Summary

Utility kWh billed	700 kWh
Effective rate per kWh	\$0.17
Effective tax rate on use	1.3%
Charging sessions	12
Total charging time	81 hours
Total EV charging kWh	567 kWh

kWh reimbursement amt. \$96.72  
Tax reimbursement amt. \$1.30  
Total reimbursement amt. **\$101.01**

Charging Sessions during utility billing period from 03/21/2023 to 04/21/2023

Session Date (EST)	Fleet EV	Start EV Charge	End EV Charge	kWh Charged	Charging Time	Cost
3/10/23 8:01PM	ACE12345	37%	96%	57 kWh	7h 52m	\$9.63
3/10/23 7:53PM	ACE12345	48%	81%	32 kWh	4h 24m	\$5.39
3/13/23 6:06PM	ACE12345	34%	82%	46 kWh	6h 24m	\$7.83
3/13/23 6:24PM	ACE12345	22%	89%	63 kWh	8h 48m	\$10.77
3/18/23 6:51PM	ACE12345	40%	84%	42 kWh	5h 52m	\$7.18
3/20/23 6:01PM	ACE12345	33%	88%	63 kWh	7h 20m	\$9.98

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