How Much Power Do I Need for My Expanding Fleet of Electric Cars and Vans in My Business

Planning charging for your electric fleet starts with knowing your daily energy needs.
The right EV charging setup keeps vehicles ready and avoids unnecessary power upgrades.

Calculate Your Daily EV Energy Usage

- Check each vehicle’s battery capacity in kWh.
- Multiply by the percentage you use each day.

- Add the total for all vehicles.

Example:
8 cars at 50 kWh using 60% daily = 240 kWh.
10 vans at 60 kWh using 70% daily = 420 kWh.
Total daily need = 660 kWh.

Ask yourself: Do you charge every vehicle every night or only those that need it?

Choose the Right Commercial EV Chargers

- **AC 7–22 kW** works for overnight or long-parking charging.
- **DC fast chargers 50 kW+** suit quick turnarounds.
- A 22 kW AC charger adds about 140 km in an hour for many vans.
- A 50 kW DC charger adds a large top-up in less than an hour.

Which vehicles need fast charging and which can wait?

Understand Peak Power Demand for Fleet Charging

- Add the kW rating of chargers running at the same time.
- Example: 5 × 22 kW chargers = 110 kW peak.
- Compare with your building’s supply limit.

Many fleets never hit 100% overlap, so actual demand is often lower.

Smart Charging Strategies for Businesses

- Set charge windows for off-peak hours.
- Use load balancing to keep site demand under a set limit.
- Prioritise vehicles with early departures or high mileage.

Plan EV Charging Infrastructure for Growth

- Forecast fleet size for the next 2–3 years.
- Install extra cabling and switchgear from the start.
- Prepare bays for future chargers even if not installed yet.

Example: 10 vehicles now, 25 in two years — cable for 20 now, add the rest later.

Reduce Fleet Charging Costs with Smart Solutions

- Charge during off-peak hours to cut bills by 20–40%.
- Add solar panels and route solar energy to chargers.
- Use battery storage to reduce peak grid draw.
- Open chargers to the public for a fee to offset costs.

Key Questions Before Expanding Your EV Fleet

- How many chargers will run at once?
- What charging speeds match your routes?
- Can your supply handle peak load?
- Could solar EV charging or a battery system cut costs?
- What data will you track to measure results?

You can make better decisions by tracking actual charging data for a few weeks before committing to a large-scale install.

Fleet managers who do this often save thousands in unnecessary upgrades.