HOME EV CHARGER INSTALLATION GUIDE

Omaha Public Power District

A practical planning guide for a safe, code-compliant home charging installation.

Start with the right question: what charger fits your driving needs, and what will it take to install it safely at your home?

1. CHOOSE THE CHARGER TYPE

Most homes can charge with either Level 1 or Level 2. Your daily mileage and overnight charging window should drive the decision.

Charger Level	Voltage	Typical Charge Time	Installation
Level 1	120V	10 - 20 hours	No install if standard outlet is available
Level 2	240V	4 - 8 hours	Requires electrician installation

Average drivers: 40 miles per day or less may be able to use Level 1 charging.
Higher-mileage drivers: 40+ miles per day usually rely on Level 2 charging.

2. CHECK ELECTRICAL FIT

Consult a licensed electrician before installation. The electrician should confirm panel capacity and the likely wiring route.

- Panel capacity: Level 2 chargers can plug in or be hardwired and typically require a dedicated 30-60 amp, 240/250V circuit.
- Distance matters: Running wire from the electrical panel to the charger location can be one of the biggest installation cost drivers.
- Grounding and circuit needs: Your installer should confirm breaker, grounding, receptacle, and hardwire requirements.

3. SELECT THE LOCATION

The best location balances daily convenience, installation cost, weather exposure, and future flexibility.

- Close to Parking Spot: Install near where the vehicle normally parks. This keeps the cord easier to use and may reduce wiring distance.
- Indoor vs. Outdoor: Garages are protected from weather. Outdoor chargers need weather-rated equipment and proper placement.
- Mounting and Access: Make sure the charger can be securely mounted and the cord will not block doors, walkways, or parking areas.

Planning tip: The lowest-cost Level 2 installation usually keeps the charger close to the electrical panel and avoids major drywall repair, trenching, or panel upgrades.

INSTALLATION, COSTS AND NEXT STEPS

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Use this page to plan the installer work, permits, OPPD notification needs, and expected cost range.

4. HIRE A QUALIFIED INSTALLER

Avoid DIY unless you are certified. Electrical work can be hazardous, and most installations require permits and inspections.

Installation may include:

- Dedicated circuit breaker
- Proper grounding
- Charger mounting and wiring
- New circuit or receptacle if needed
- Permitting and electrical inspection
- Drywall repair and painting, if needed

5. COORDINATE PERMITS

Your licensed electrician should coordinate with the city or county to obtain any required electrical permits.

OPPD NOTIFICATION

You or your licensed electrician must contact OPPD to begin the interconnection process before installation if the equipment includes Vehicle-to-Grid, Vehicle-to-Home, or home energy storage capabilities.

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6. UNDERSTAND THE COST RANGE

Level 2 Estimated Cost Planning

Costs vary most based on panel capacity, charger location, wiring distance, and installation complexity.

Level 2 charger	$300 - $700	Equipment cost varies by amperage and smart features.
Installation	$500 - $2,000	Higher if the wiring route is long or complex.
Panel upgrade, if needed	$1,000 +	Depends on panel condition and available capacity.
Typical total	**$800 - $3,000 +**	**Verify final estimate with a licensed electrician.**

Incentives: Federal or state tax credits may be available. Eligibility and availability should be verified before purchase.

7. FUTURE-READY CONSIDERATIONS

- Smart chargers: Enable scheduling, energy monitoring, and remote control.
- Future integration: Consider battery storage, solar, Vehicle-to-Home, or Vehicle-to-Grid capabilities.
- Multiple EVs: Plan for future vehicle additions or dual-port charging.

Need more information? If you do not already have an electrician, OPPD's Trade Ally list can help identify qualified professionals. For questions about EV charging installation, contact productsandservices@oppd.com or 531-226-3510.