Tesla Charging

EVSE Training for W&M
Inspectors and Service Agents

February 2026
Garden Grove, CA

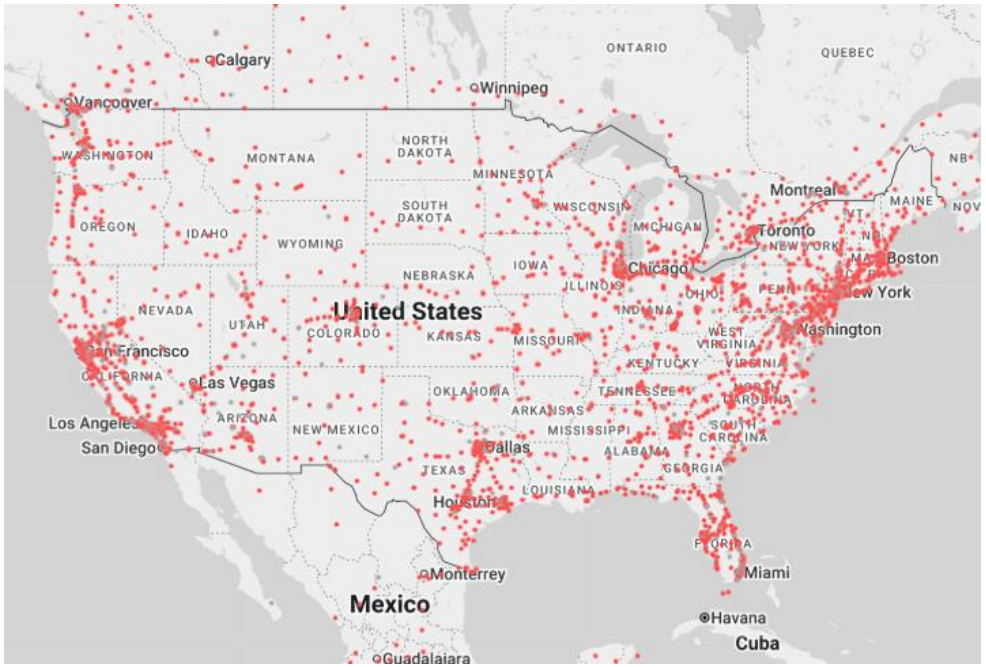
LAST EDITED
July 2025

Agenda

- Network footprint in the US
- Tesla's approach to charging infrastructure
- Charging user experience
- Practical considerations for inspection

Tesla Charging Network

Ubiquity is key



More than 2,900 locations and 36,000 Supercharger (DCFC) Stalls in the U.S.

More than 4,700 locations and 12,000 Destination Chargers (AC) in the U.S.

Tesla's Charging Philosophy

Seamless, convenient, and cost effective

- **Objective:** Create a convenient and seamless customer charging experience that is always reliable

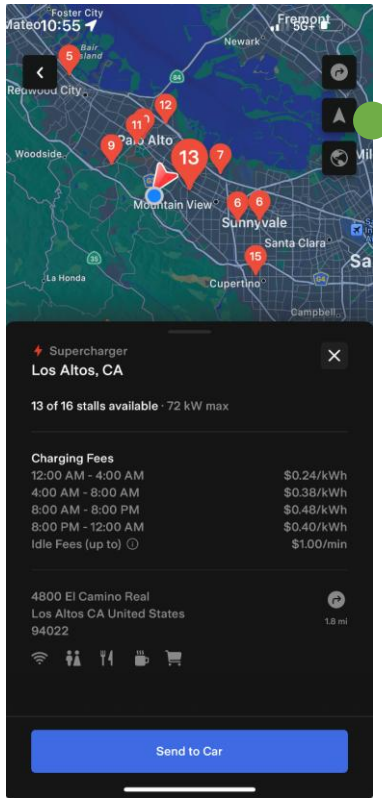
- **Pathways:**
  - Simple and efficient designs
  - Plug and Charge
  - 99%+ uptime
  - Larger sites as customer adoption grows
  - Ubiquitous charging that integrates with customer's daily lives
  - Dynamic trip planner

Charging User Experience

Digital customer interfaces in vehicle and phone are used for site discovery, payment, charging control, and receipt.

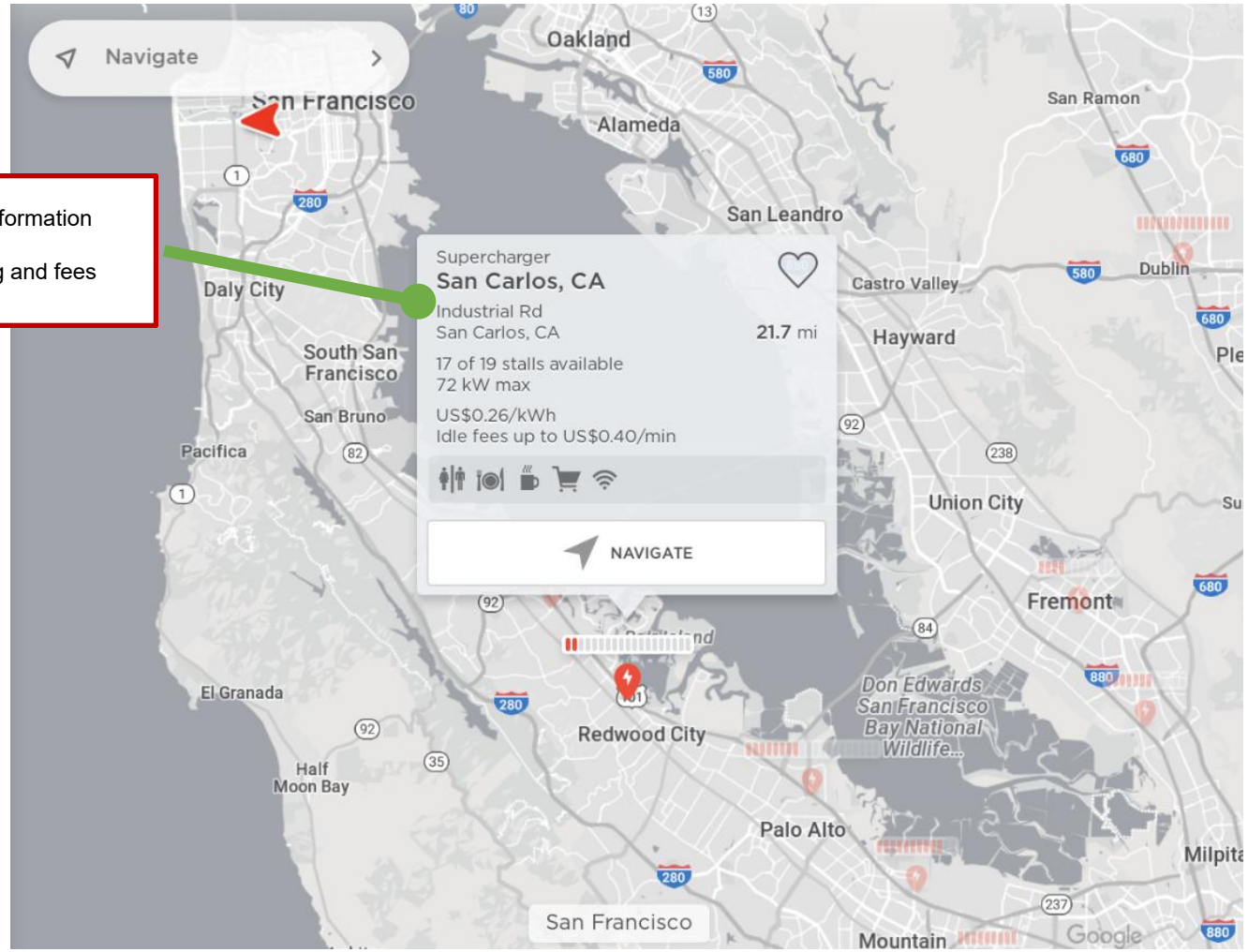
1) Prior to Arrival: Wayfinding and Price Discovery

- Display charging location, real-time pricing and fees to help drivers decide where to charge



Site information

Pricing and fees

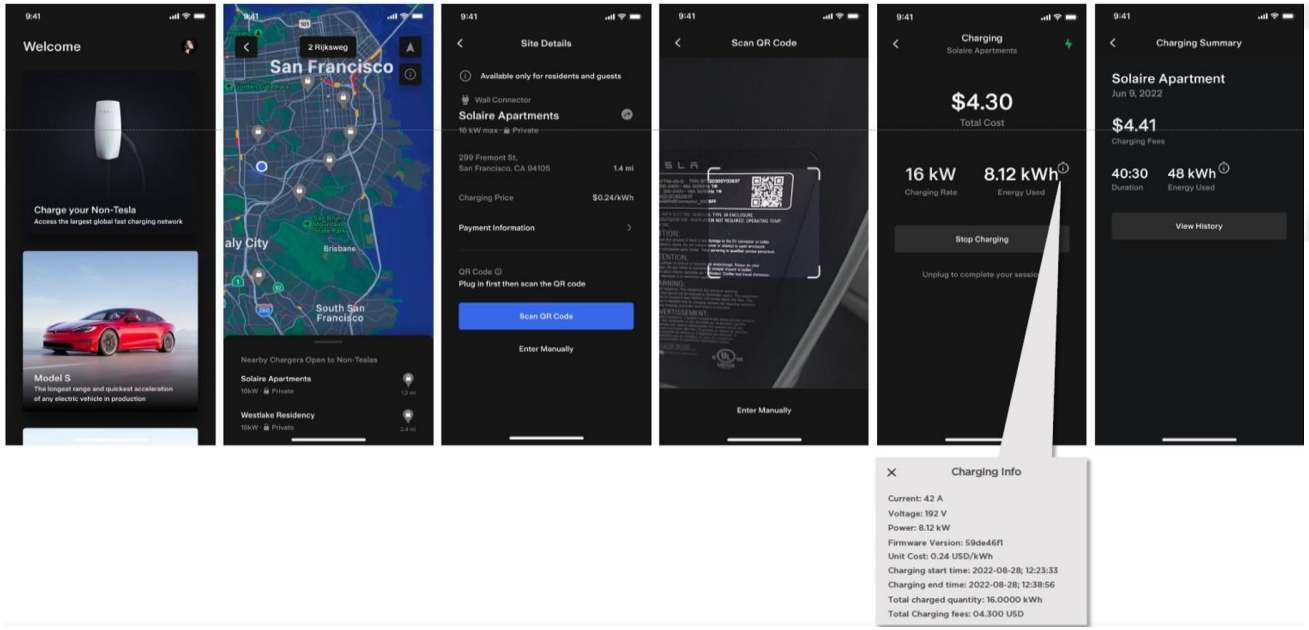


Charging User Experience

Digital customer interfaces in vehicle and phone are used for site discovery, payment, charging control, and receipt.

2) During Charging: User Authentication, Charging Control

- Payment method input to Mobile App or web interface
- Start charging functionality on Mobile App (for non-Tesla EV)
- Real-time display in vehicle UI/Mobile App or web interface on metering, energy, session pricing



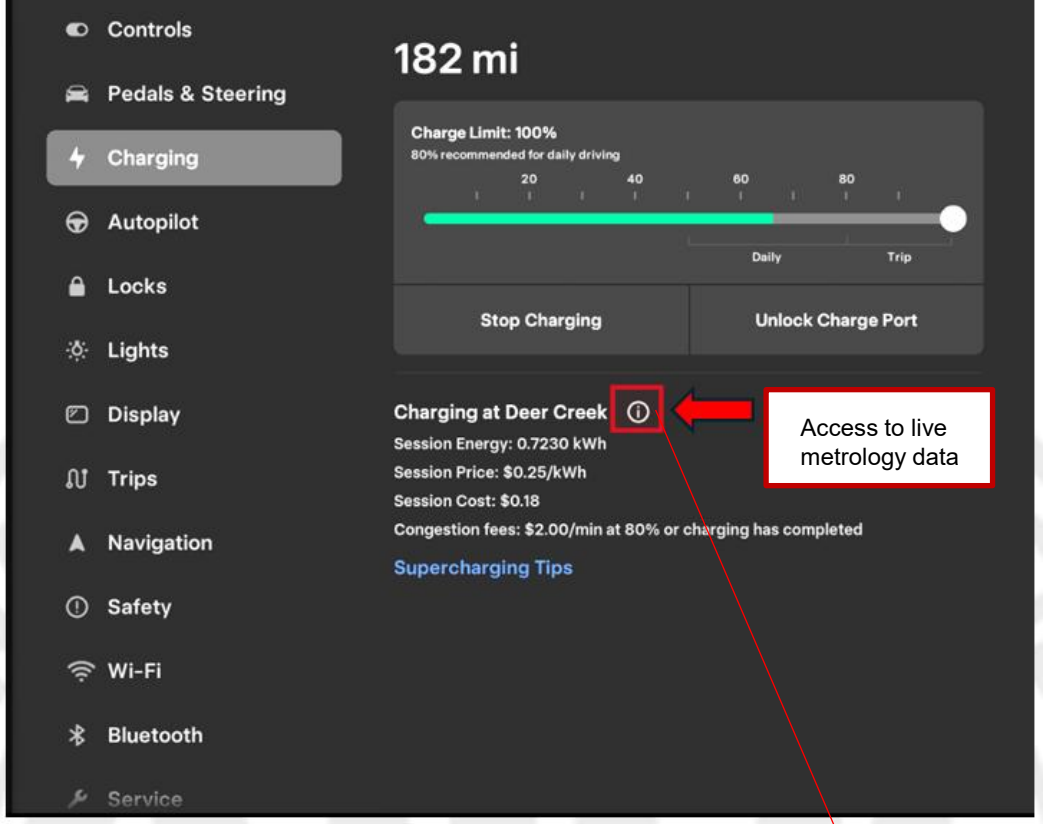
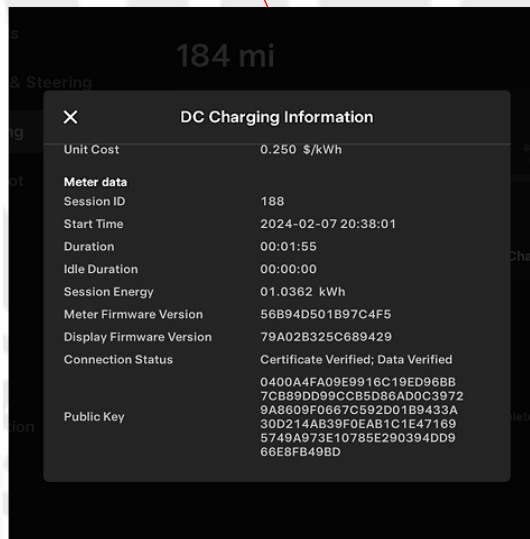


Figure 5. Tesla vehicle user interface display example

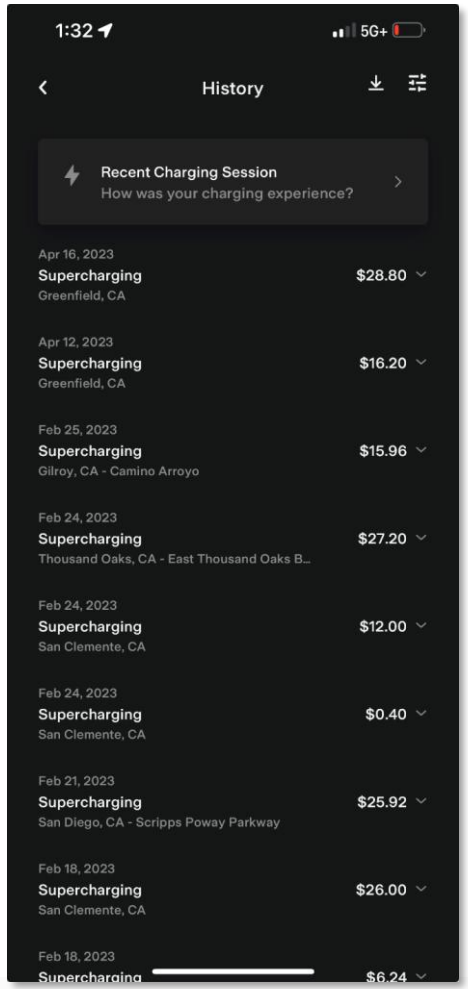


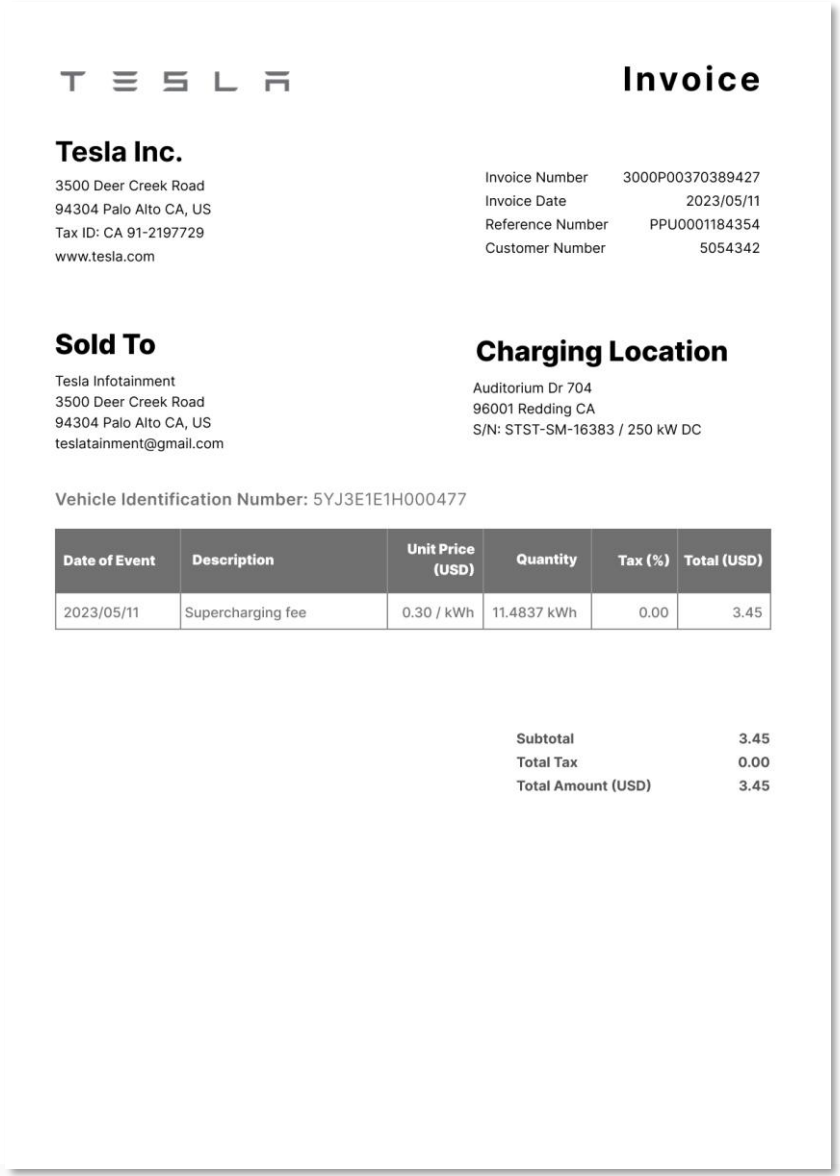
Charging User Experience

Digital customer interfaces in vehicle and phone are used for site discovery, payment, charging control, and receipt.

3) After Charging: Receipt

- Receipt provided in Tesla account





TESLA

Invoice

Tesla Inc.

3500 Deer Creek Road
94304 Palo Alto CA, US
Tax ID: CA 91-2197729
www.tesla.com

Invoice Number	3000P00370389427
Invoice Date	2023/05/11
Reference Number	PPU0001184354
Customer Number	5054342

Sold To

Tesla Infotainment
3500 Deer Creek Road
94304 Palo Alto CA, US
teslatainment@gmail.com

Charging Location

Auditorium Dr 704
96001 Redding CA
S/N: STST-SM-16383 / 250 kW DC

Vehicle Identification Number: 5YJ3E1E1H000477

Date of Event	Description	Unit Price (USD)	Quantity	Tax (%)	Total (USD)
2023/05/11	Supercharging fee	0.30 / kWh	11.4837 kWh	0.00	3.45

Subtotal	3.45
Total Tax	0.00
Total Amount (USD)	3.45

Weights and Measures Program Objectives:

1. Ensure consumer protection
2. Avoid disruption to EV drivers
3. Scale programs at reasonable cost and effort

Man-in-the-middle cable testing and EV

Practical considerations for inspection

Consider

- Use an EV for testing rather than load box
- Handbook 44 allows for single set point test for field verification – 40% of maximum deliverable amperage (MDA) – when using an EV

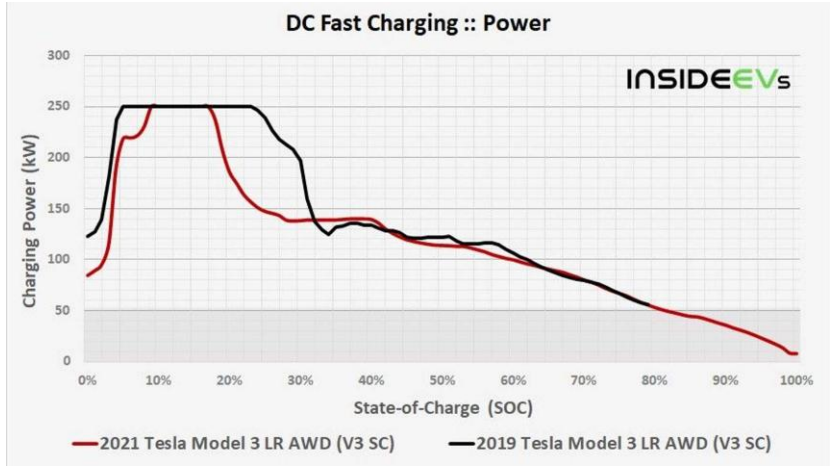
Benefits

- EV can serve as mode of transportation and testing tool for inspector
- Inspection is consistent with how EV charger is used
- Load boxes do not always behave like EVs
- Diversified test options can support doing more with less

Challenge

- Limited resources

EV + man-in-the-middle test setup



Power requested from EV during DCFC session is not static.

Risk based testing

Practical considerations for inspection

Consider

- There are already 50% more EV chargers than gas pumps in CA with < 10% EVs on the roads
- Test a sample of devices per site
- Shift to man-in-the-middle cable testing

Benefits

- Reduce staff and testing resources needed
- Fitting for large sites (4 stalls vs 8 stalls vs 100+ stalls)
- No waiting for every charger to be vacant

Challenge

- Initial data is needed to appropriately identify categorize risk

Lost Hills, CA: **168** stalls supported by 11 MW solar and 39 MWh of storage located off I-5. Full week to test

Dwell time may be 8 hours at workplace during business hours. When to test?

Conditional use authorization via “blue tags”

Practical considerations for inspection

Consider

- Rely on conditional use authorization to keep EV chargers in service after minor violations
- Flexibility in timing to resolve issues

Benefits

- Focuses enforcement on issues that meaningfully affect consumers
- Minimizes disruption and confusion to EV drivers
- Consistent with state EV infrastructure reliability goals
- Appropriate given newness of enforcement programs

Challenge

- Certain level of inspector knowledge is needed
- Gray areas