City of Dallas

The Use and Function of Solar Canopies for Fleet Management

October 14, 2026

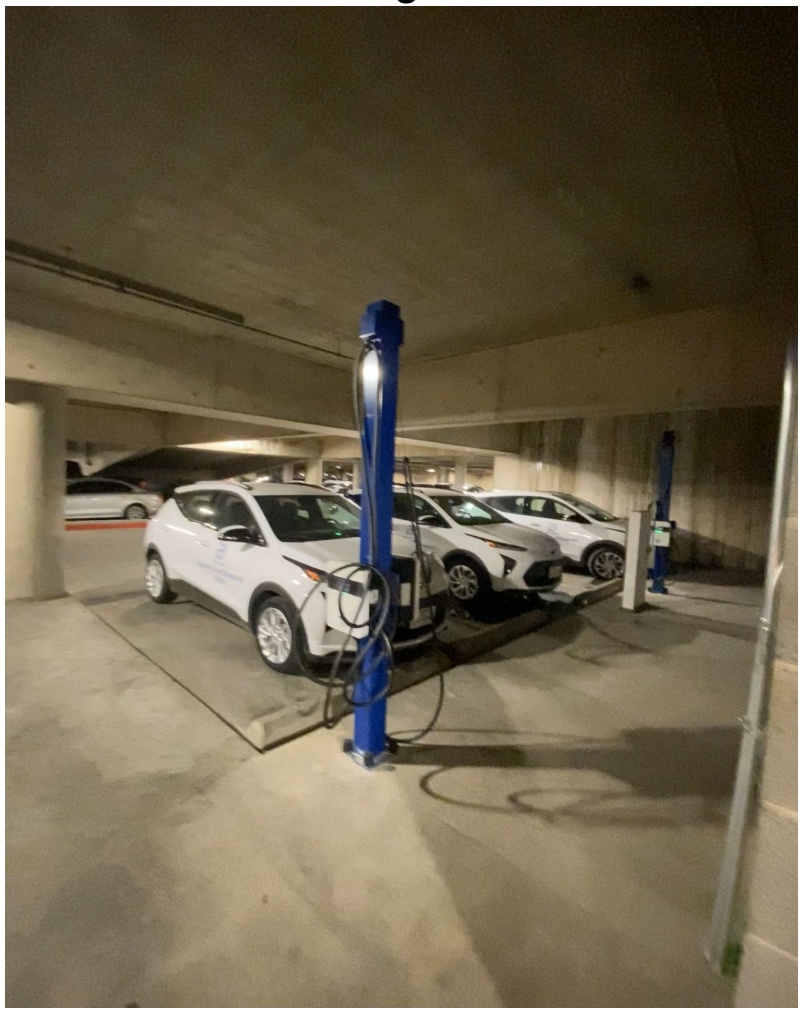
Equipment and Fleet Management

Vincent C. Olsen CPFP, Director

Charger Types in Action

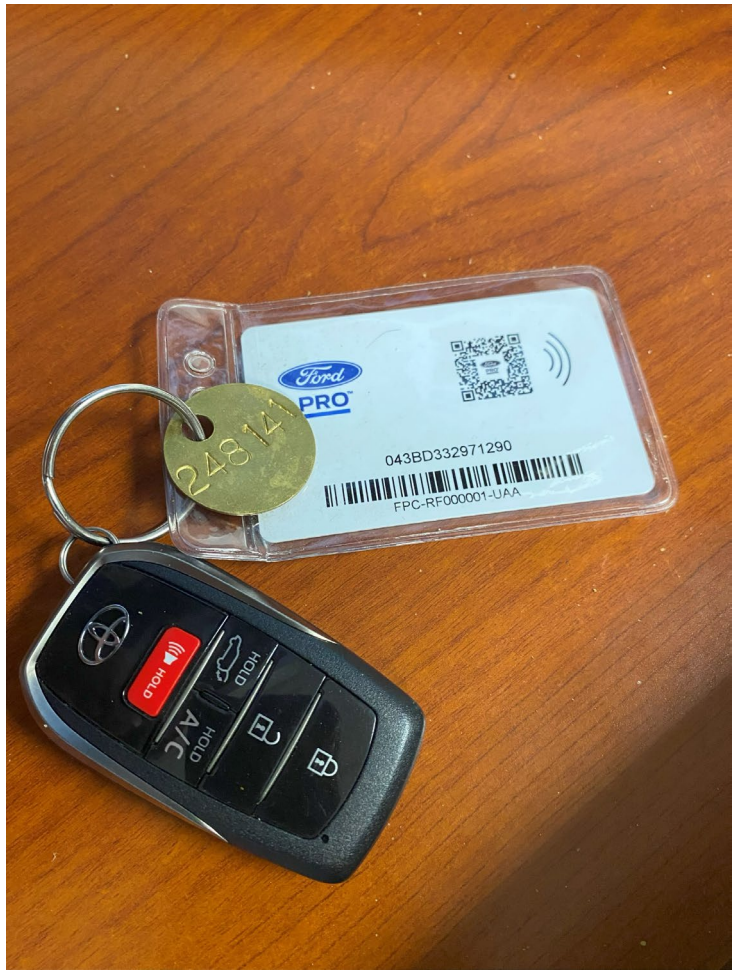
Level III Chargers

Level II Charger, On Grid



Level II Charger, Off Grid

Initiating a Charging Event

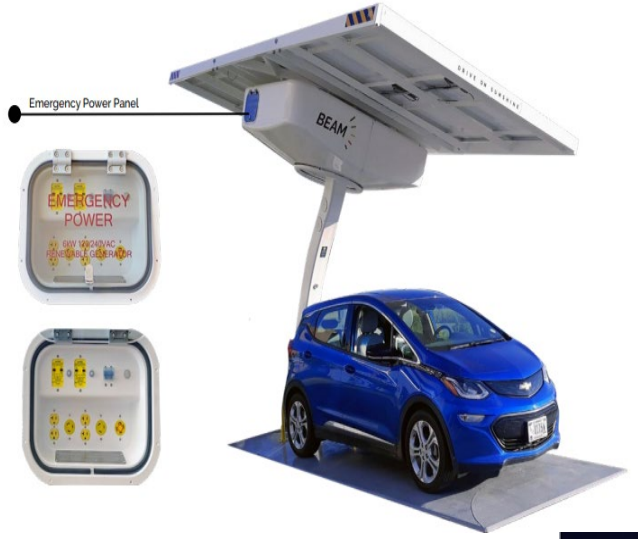


Solar Canopy, Prime Feature

- Can provide on grid or off grid energy
- 265 miles of sunshine energy generated and stored daily
- Can charge multiple (6) vehicles, charging is divided by vehicles hooked up
- Solar tracking feature
- Wind rated 160 MPH
- Flood rated 9’6”

Additional Features

- Auxiliary and Emergency Back up Power
  - 1 each 30A main 240V Breaker
  - 2 X 20A push to reset 120 V breakers
  - 1 X 240VNEMA L14 30 Outlet
  - 2 X 120V NEMA 5-20 duplex (GFI Protected)
  - 2 X 120V NEMA L5-20 outlet (twist lock)
- Parking Lot Lighting at night
- Parking Lot Shade
- Can be relocated
- Charger agnostic
- Vehicle agnostic
- Can be used internally or externally



Solar Canopies City Wide

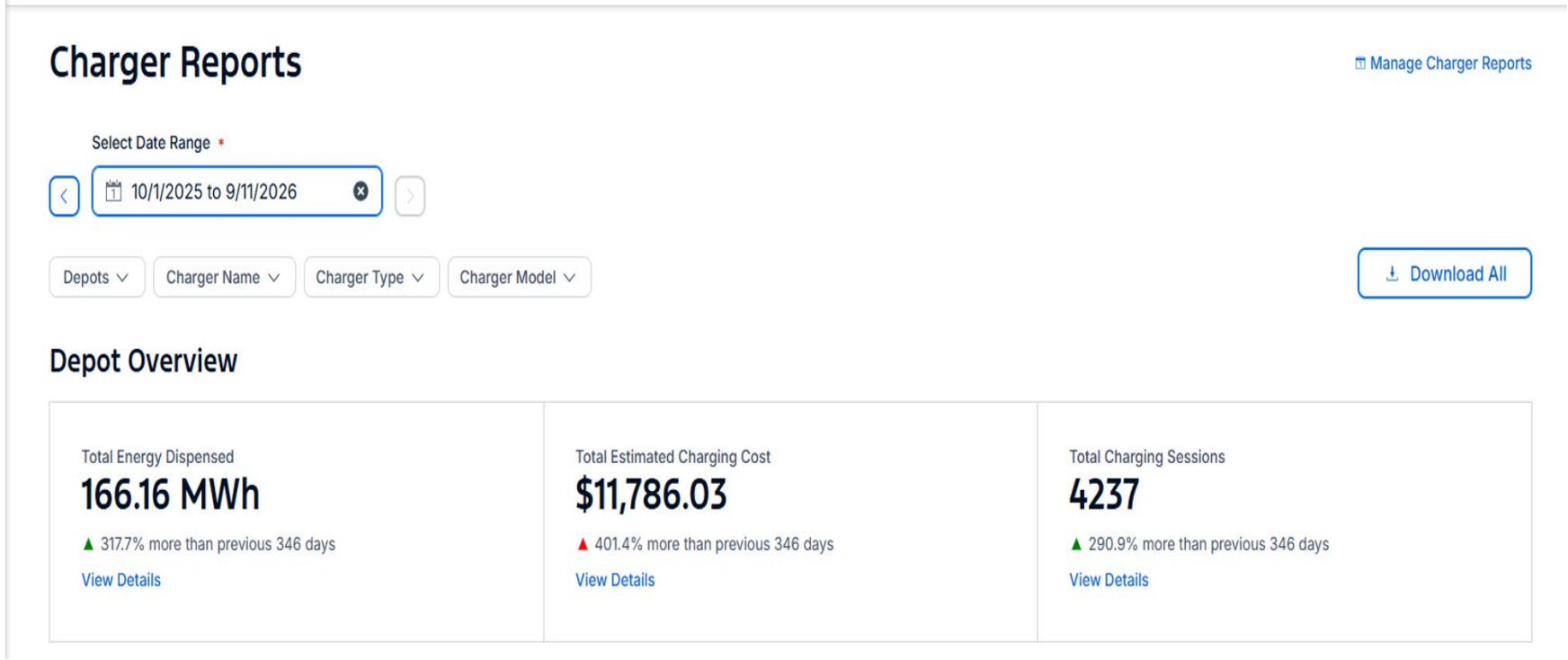
- Currently, there are 17 solar canopies.
- Canopies are located at 6 locations throughout the city with the largest concentration at 3202 Canton street.
- There are 34 (out of 114) Level II chargers that are 100% solar powered.
- There are 10 departments actively benefiting from off grid charging.

What Kind of Vehicles Benefit

- Sedans
- SUV
- Pick-ups
- Passenger Vans
- Delivery Vans
- Utility / Golf
- Medium Duty (ordered)

Energy Savings

- Current total annual electrical usage for City of Dallas EV Fleet is 170 MWH
- Off grid accounts for roughly 12 MWH of solar vehicle charging
- Estimated gallons converted from sunshine, 3800 gallons of gasoline
- Estimated cost avoidance $12,000 in fuel expense

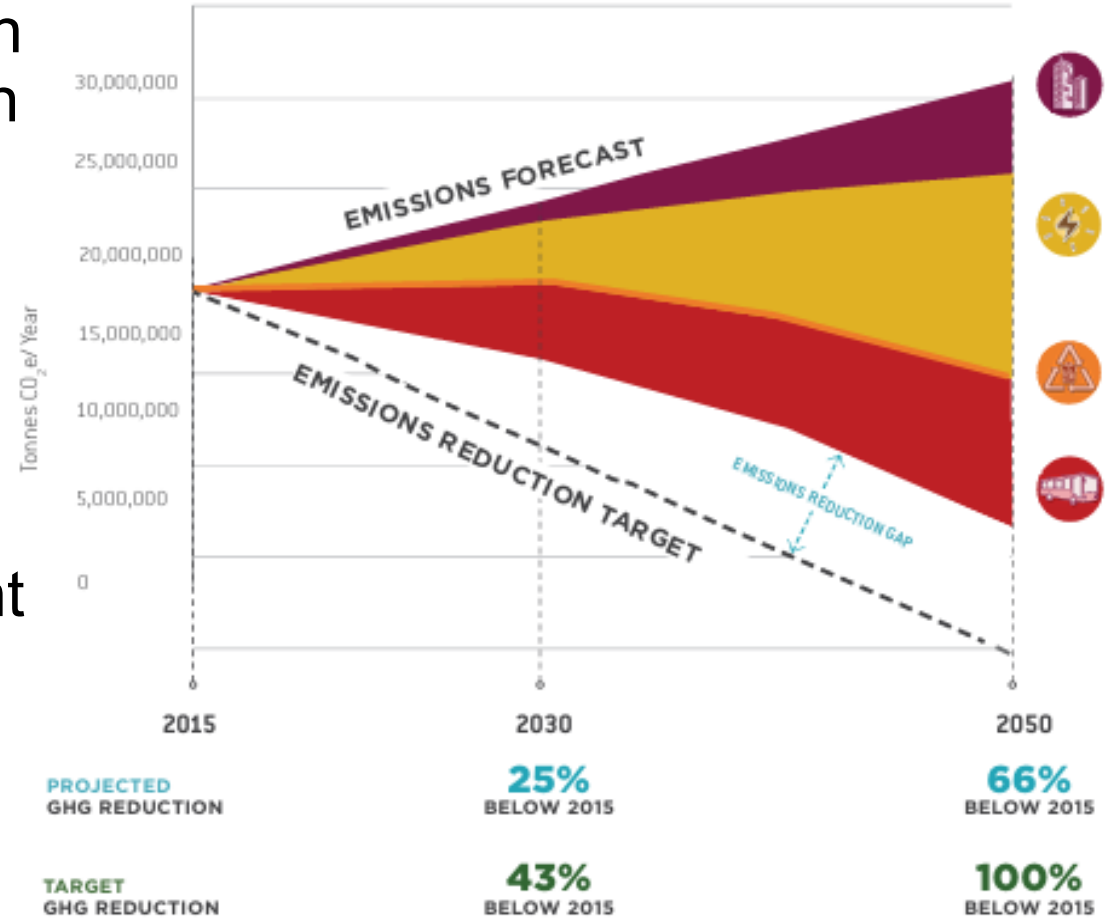


CECAP Alignment

Solar Canopies for Fleet Management align with Comprehensive Environmental & Climate Action Plan (CECAP) Actions focus on progressing sustainable city operations.

CECAP Actions

- Transportation 1: Work with City of Dallas, DISD, and DART to transition the bus and light duty fleet to 100% electric by 2040
- Energy 7: Extend city efforts to develop more renewable energy projects on city facilities



Questions

- Questions and Answers

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