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Fleet Charging Stations and Infrastructure

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You know which EVs you want for your Fleet that will meet your operating requirements. What's next?

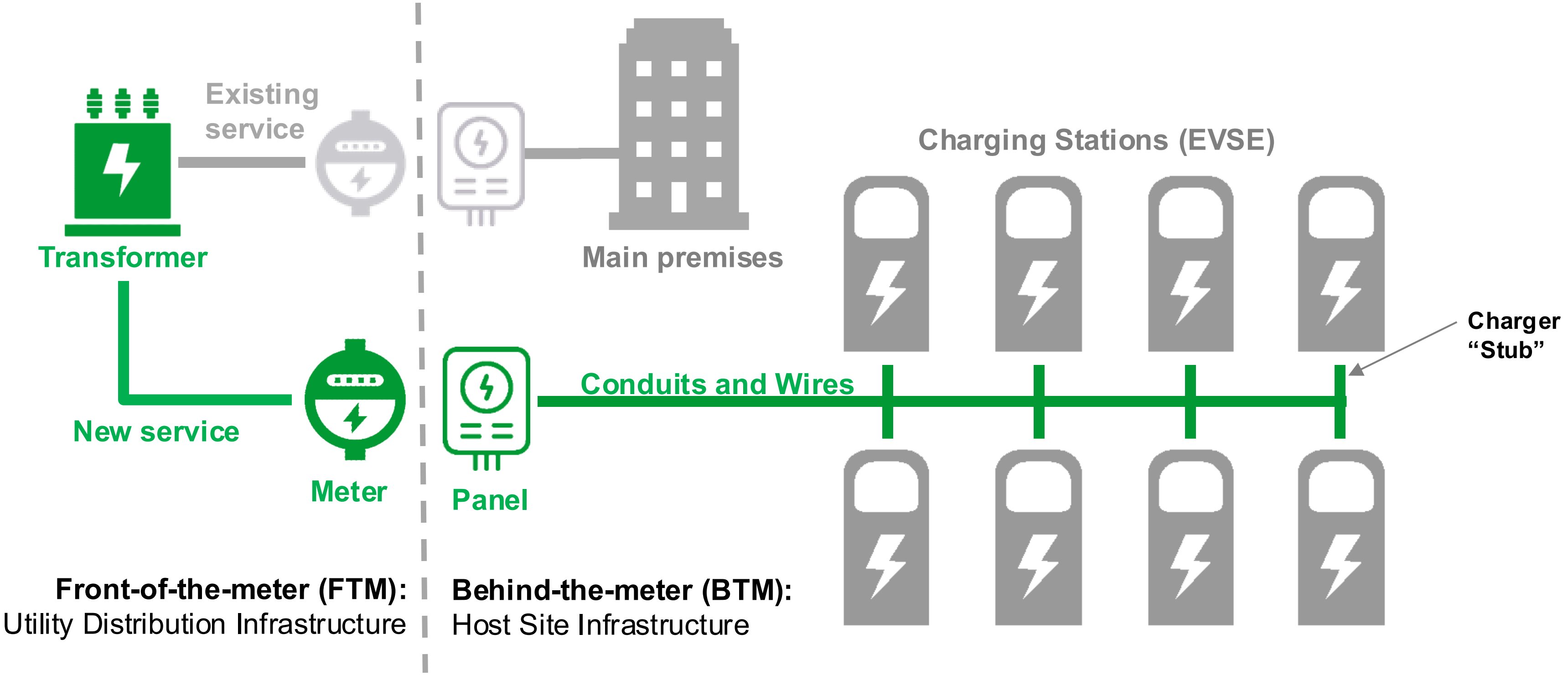
- **Key questions:**
  - How quickly will the vehicles need to be charged?
  - When do they need to be charged/can they be charged? During the work-day or overnight?
  - Where do they need to be charged?
  - Is there sufficient electrical capacity?
- **The answers to these questions impact the charging equipment you will need, associated electrical infrastructure and, of course, the cost of the project.**

EV Charging and Infrastructure Terminology

- **Level 2 (L2) Chargers** are most common. They charge at a rate of 12 to 80 miles per hour, generally fast enough for most uses, while being affordable and requiring infrastructure (208V) already found in most places
- **Direct Current Fast Chargers (DCFC)**. These charge at a rate of 75 -1200 miles per hour, much faster than L2s, but much more expensive, requiring 480V.
- **Make-Ready**. Term used to describe costs associated with making a site ready for EV charging

What is “Make-Ready” EV Charger Infrastructure?

“Make-ready” is used to refer to costs for making a site “ready” for EV charging, excluding the chargers. This could include permits, electric panel upgrades, conduit, wiring, site work, trenching and repair, required protective equipment, and associated labor. EV chargers, and mounting equipment/pedestals are not eligible for program rebates.



Existing service

Transformer

Main premises

Charging Stations (EVSE)

Conduits and Wires

Charger “Stub”

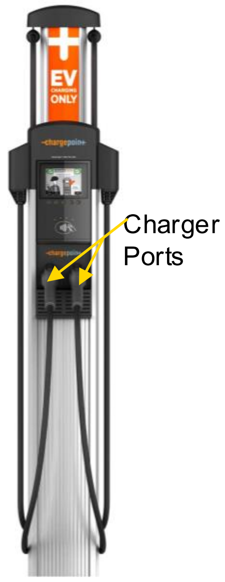
New service

Meter

Panel

Front-of-the-meter (FTM):
Utility Distribution Infrastructure

Behind-the-meter (BTM):
Host Site Infrastructure

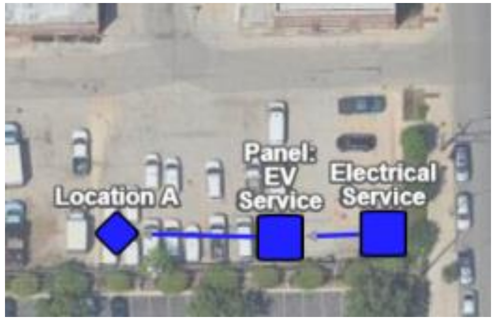


Charger Ports

Hypothetical EV Fleet of 10 Transit Vans
Driven during day, Parked & Charged Overnight

Vehicle Overview

Year	Qty	Electric Vehicle	Mi/day	kWh/day	Max kW	Hours
2025	10	2024 Ford E-Transit - Medium Roof, Long Length - 89 kWh	40	22 kWh	46.0 kW	8PM—5AM



Current Vehicle

Vehicle class: Class 1
2019 Sample Gas/Diesel Class 1 - Gas - Cargo Van - 3.6L
Operational requirements: 40miles/day avg
Depot hours: 8PM — 5AM (overnight)
Estimated MSRP: $47,000

Proposed Replacement Vehicle

Vehicle class: Class 1
2024 Ford E-Transit - Medium Roof, Long Length - 89 kWh
Range per charge: 159 miles
Primary charger: 11.5 kW / 48 A / Level 2
Carbon savings: 28.81 MT
Estimated MSRP: $53,000

Charging equipment overview

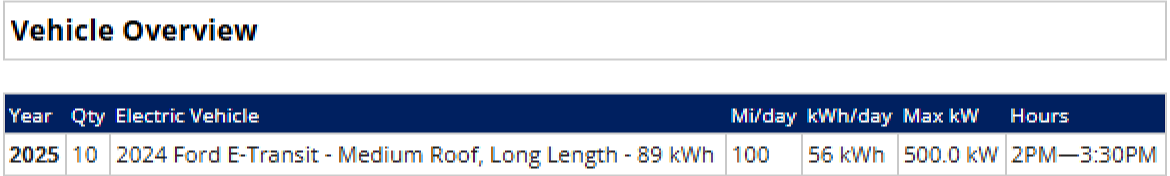
Year	Qty	Description	Per	Total
2025	10	11.5 kW Level 2 Charger	$2,738	$27,382
2025		Panels, Transformers, Wires		$65,821
				$93,203

EV:
E-Transit - Medium Roof, Long Length - 89 kWh

Start Time: 8:00 PM
End Time: 5:00 AM
Charging: ● Staggered ○ Simultaneous
Equipment: 11.5 kW / 48
Miles/Day: 40
Configure: ● Together ○ Individually

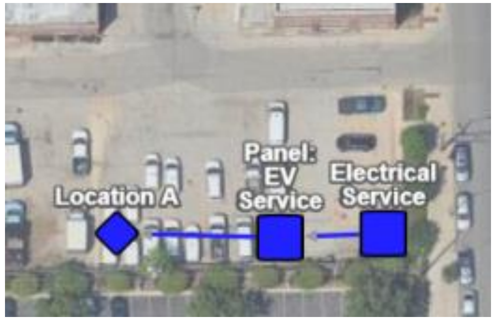
8:00pm — 10:08pm	11.5 kW / 48 A / Level 2	40	22 kWh/day
10:18pm — 12:26am	11.5 kW / 48 A / Level 2	40	22 kWh/day
12:36am — 2:45am	11.5 kW / 48 A / Level 2	40	22 kWh/day
8:00pm — 10:08pm	11.5 kW / 48 A / Level 2	40	22 kWh/day
10:18pm — 12:26am	11.5 kW / 48 A / Level 2	40	22 kWh/day
12:36am — 2:45am	11.5 kW / 48 A / Level 2	40	22 kWh/day
8:00pm — 10:08pm	11.5 kW / 48 A / Level 2	40	22 kWh/day
10:18pm — 12:26am	11.5 kW / 48 A / Level 2	40	22 kWh/day
12:36am — 2:45am	11.5 kW / 48 A / Level 2	40	22 kWh/day
8:00pm — 10:08pm	11.5 kW / 48 A / Level 2	40	22 kWh/day

Hypothetical EV Fleet of 10 Transit Vans
Driven Daily & Overnight, Limited Charging Window



Vehicle Overview

Year	Qty	Electric Vehicle	Mi/day	kWh/day	Max kW	Hours
2025	10	2024 Ford E-Transit - Medium Roof, Long Length - 89 kWh	100	56 kWh	500.0 kW	2PM—3:30PM



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Proposed Replacement Vehicle

Vehicle class: Class 1
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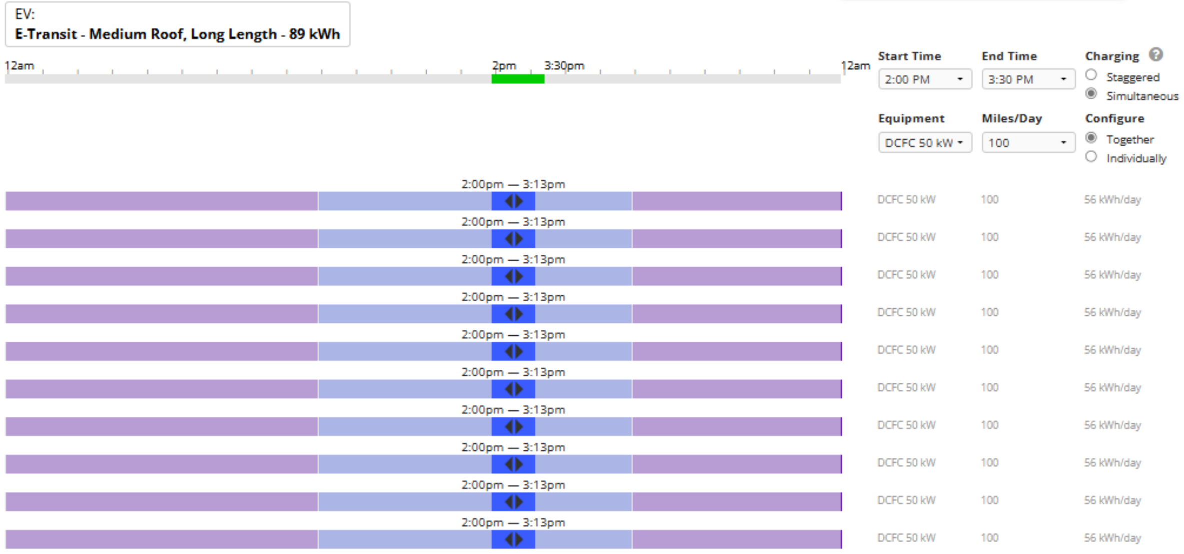
Carbon savings: 28.81 MT
Estimated MSRP: $53,000



EV:
E-Transit - Medium Roof, Long Length - 89 kWh

Start Time 2:00 PM
End Time 3:30 PM
Charging
○ Staggered
● Simultaneous
Equipment DCFC 50 kW
Miles/Day 100
Configure
● Together
○ Individually

2:00pm — 3:13pm	DCFC 50 kW	100	56 kWh/day
2:00pm — 3:13pm	DCFC 50 kW	100	56 kWh/day
2:00pm — 3:13pm	DCFC 50 kW	100	56 kWh/day
2:00pm — 3:13pm	DCFC 50 kW	100	56 kWh/day
2:00pm — 3:13pm	DCFC 50 kW	100	56 kWh/day
2:00pm — 3:13pm	DCFC 50 kW	100	56 kWh/day
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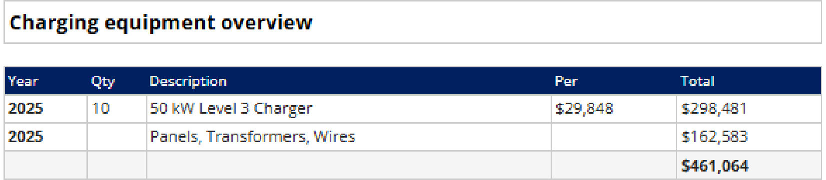

Charging equipment overview

Year	Qty	Description	Per	Total
2025	10	50 kW Level 3 Charger	$29,848	$298,481
2025		Panels, Transformers, Wires		$162,583
				$461,064

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