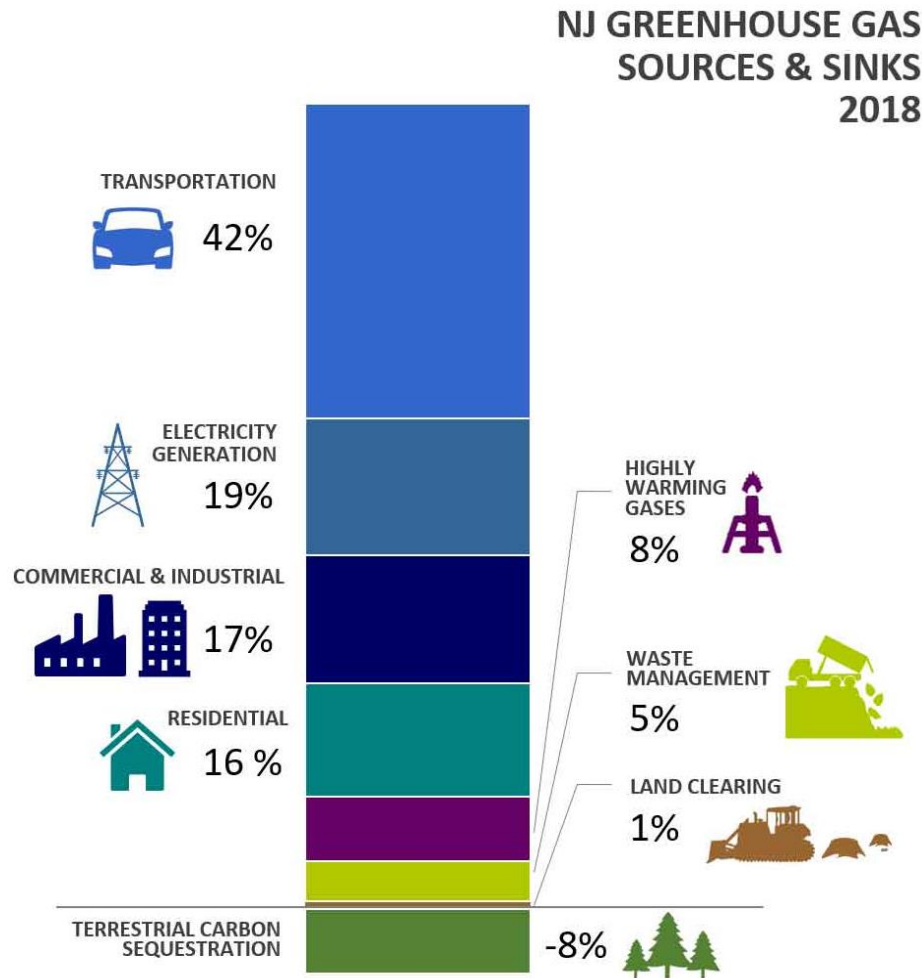


FLEET EVs: 101





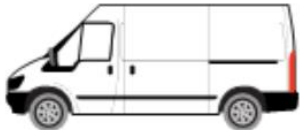







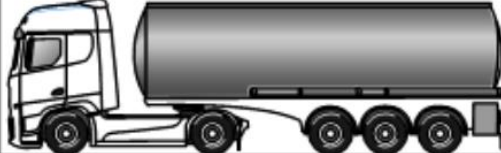

New Jersey: State of EVs in the State



Governor Murphy has made numerous commitments to electrify the transportation sector in order to reach his statewide clean energy goal of 100% clean energy by 2050.

- Prioritization of vehicle electrification at the State level:
 - Regional Greenhouse Gas Initiative (RGGI)
 - Energy Master Plan
 - DEP's GWRA 80X50 Report
 - Landmark 2020 EV Act
 - Adoption of the Advanced Clean Trucks (ACT) Rule
 - Advanced Clean Cars (ACC) II Rule Adoption Proposed



Weight Class	Class 2b	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8
Example Vehicles	  	  	  	  			
GVWR	8,500 – 10,000 lb 3,856 – 4,536 kg	10,001 – 14,000 lb 4,536 – 6,350 kg	14,001 – 16,000 lb 6,351 – 7,257 kg	16,001 – 19,500 lb 7,258 – 8,845 kg	19,501 – 26,000 lb 8,846 – 11,793 kg	26,001 – 33,000 lb 11,794 – 14,969 kg	> 33,000 lb > 14,969 kg

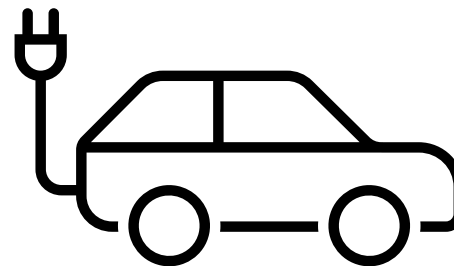
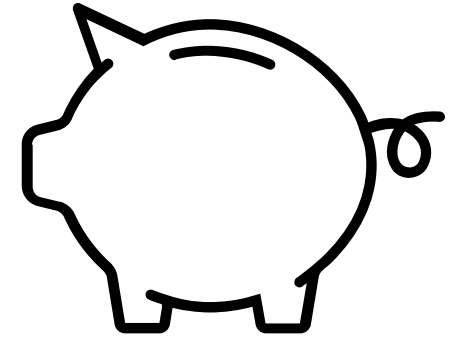
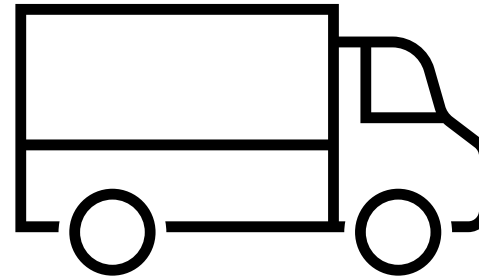
Reminder: Vehicles Available Through NJ ZIP

All vehicle types - trucks, buses/passenger transport, specialty vehicles (e.g., garbage trucks, ambulances) - are eligible for this program, given they fall within the Class 2b - Class 8 categories (8,501 lbs – 33,001 lbs, GVWR), and are registered and used in compliance with program agreements.

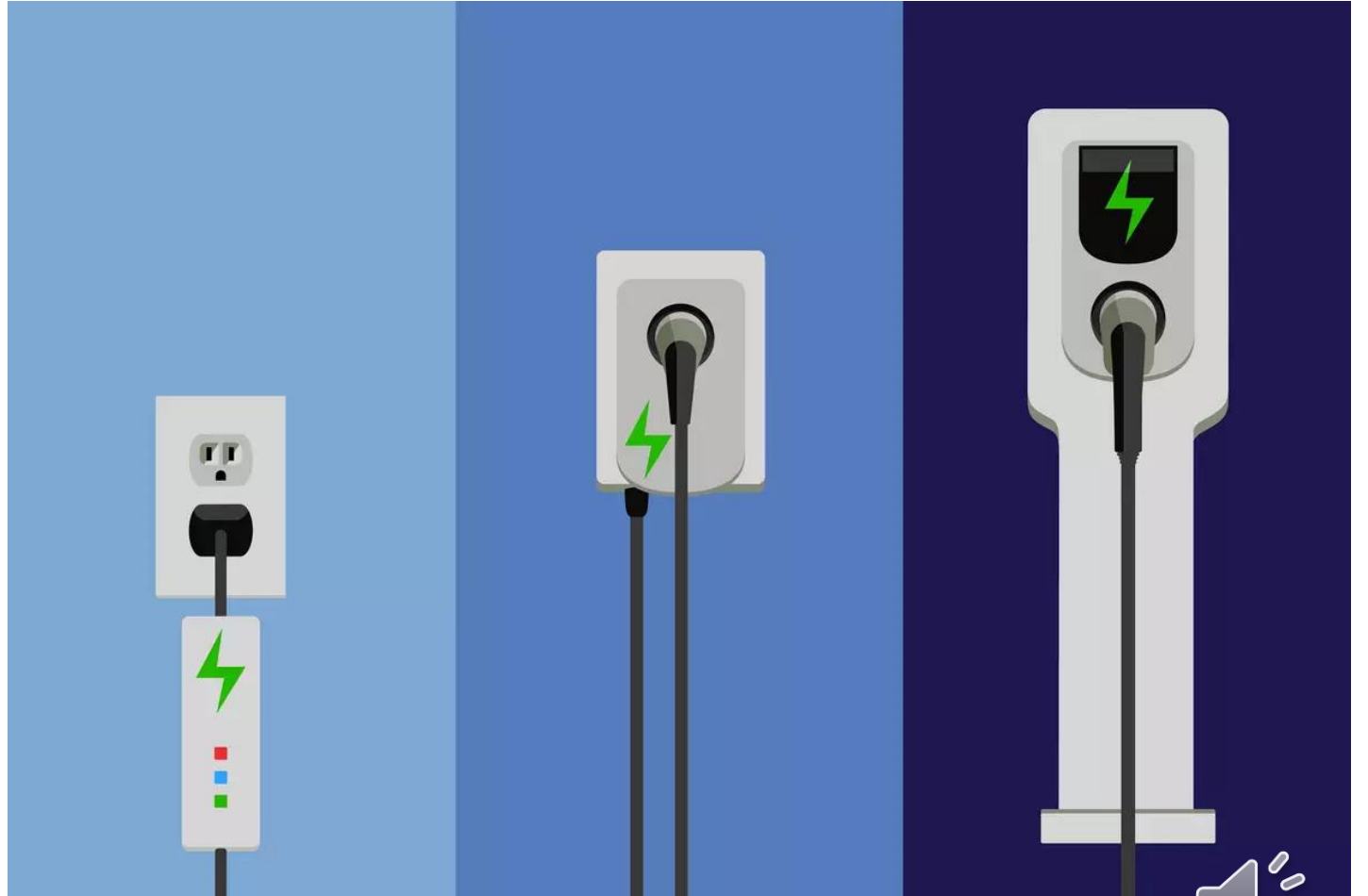


Why Electrify Your Fleet?

- Clean travel
 - Reduced emissions
 - Especially in high-traffic/high-pollution areas
- Numerous savings/efficiencies
 - Fueling an entire fleet
 - Reduced maintenance costs for EVs
- Fleets are great candidates for electrification
 - High-usage vehicles
 - Predictable usage schedule
 - Predictable routes



Type of
Charging:
What is the
difference?



Cars.com illustration by Paul Dolan



Level 1 Charging: "Trickle Charging"

Very low power charging using a standard outlet. May be suitable for vehicles with limited travel profiles.



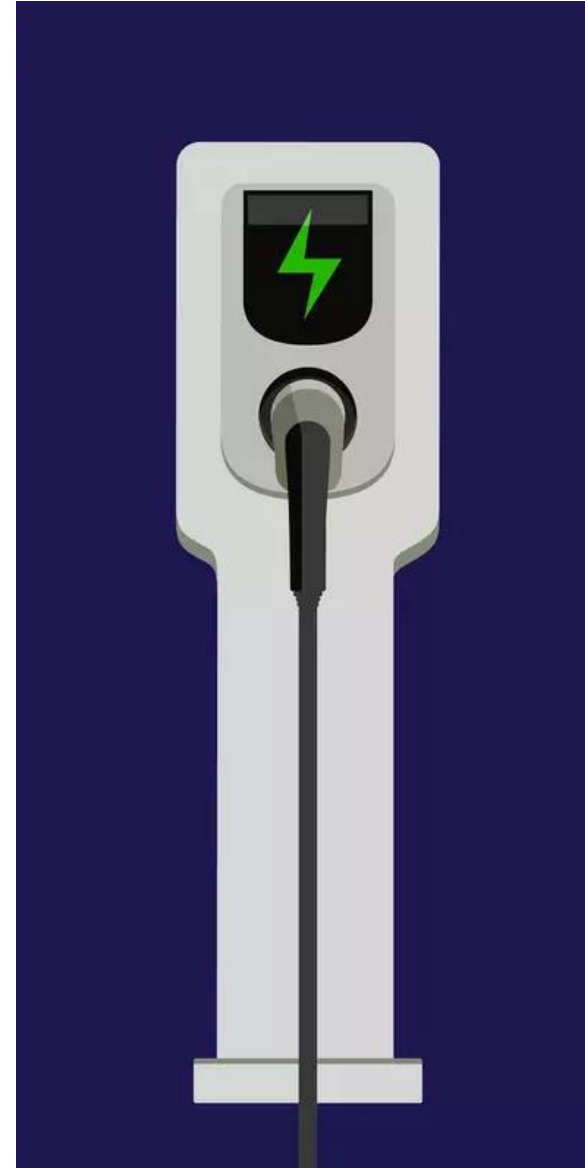
Level 2 Charging: "Routine Charging"

The standard for routine fleet vehicle charging. Fully charges overnight for all light-duty or medium, heavy-duty with smaller batteries or limited travel profiles.



DC Fast Charging: "Fast Charging"

- A high-powered but costly option, is needed for high-use fleets. Quickly charges all LDVs or MHDVs with smaller batteries or limited travel profiles (generally to 80% in 30-60 minutes or less); overnight for vehicles with larger batteries.



Questions For Installing Fleet Charging Infrastructure:

STEP 1: SELECTING A CHARGER

Understand how you use your vehicle

- How is the fleet vehicle used?
- What is the daily driving range of the fleet vehicle?
- How often are the fleet vehicles used?
- Is the operation schedule predictable on a day-to-day and year-round basis?
- What is the average and longest distance that the vehicle will travel at one time?
- Is there a predictable block of time that the vehicle can charge?

Details of charging station

- Which charging station vendor will you use?
- How many chargers/plugs will you need?
- What power charging stations do you need?
- What information do you want to track? (Charger use, time of use, cost per charge, who uses chargers)
- What are the software requirements of the vendor and what type of data do you need to report?

Charging station operations

- How will drivers be trained for operating and charging electric vehicles?
- How will drivers be trained to safely handle an EV in the event of a fire.
- Who will handle charging of vehicles? (Will each driver plug in the vehicle, or will one person be designated to plug in vehicles?)
- Who will have access to software and who will manage users?

STEP 2: CHARGER LOCATION

- How many parking spaces are needed for your charging stations and electric vehicles?
- Where will charging stations be located and what is the current available power at the location?

STEP 3: FUTURE-PROOFING

- How many vehicles are there in the entire fleet and how many electric vehicles are being procured now?
- What will future charging needs be as your fleet electrifies and how can you best prepare now?
- Does it make sense to future-proof and install make ready infrastructure in preparation for a fully electric fleet?



Decision-Making Steps

Step 1: Selecting a Charger

Step 2: Charger Location

Step 3: Future-Proofing





Hypothetical: Lena's Mobile Vet Service





Step 1: Selecting a Charger



How is the vehicle used?





What is the distance that the vehicle(s) will travel?

What is the maximum driving range of the electric vehicle?



Is there a predictable block of time that the vehicle can charge?



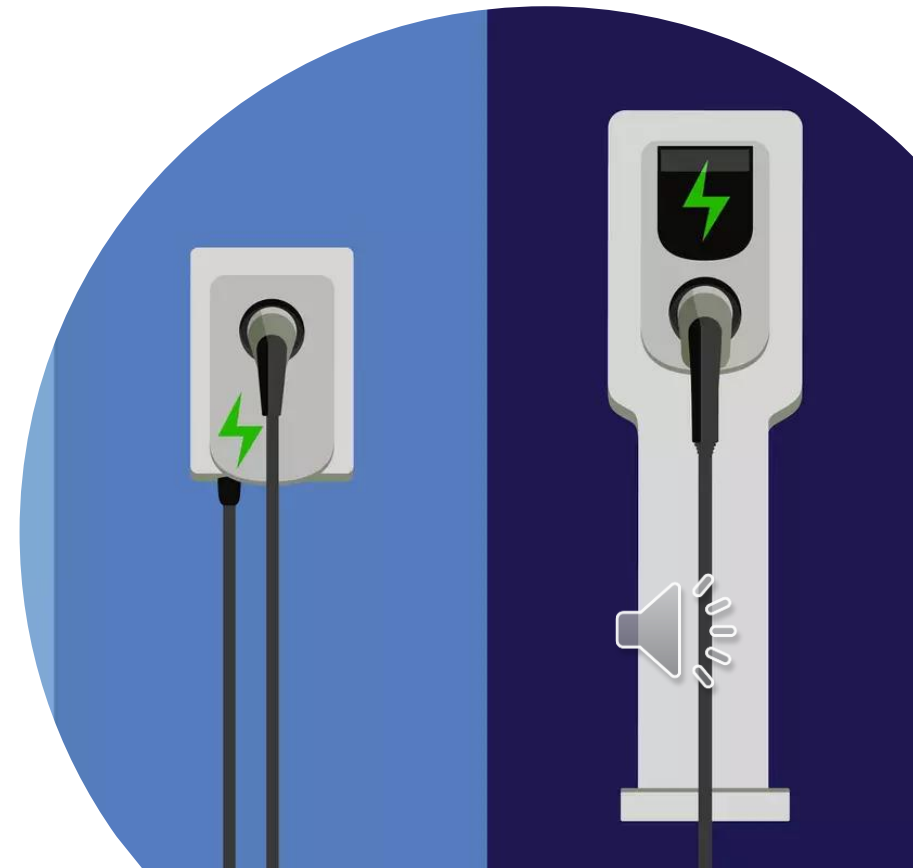
How is the vehicle used?

What is the distance that the vehicle(s) will travel?

Is there a predictable block of time that the vehicle can charge?

Now that you have answered these questions....

How many (and what type) chargers/plugs will you need?



What power level is best for Lena's business?



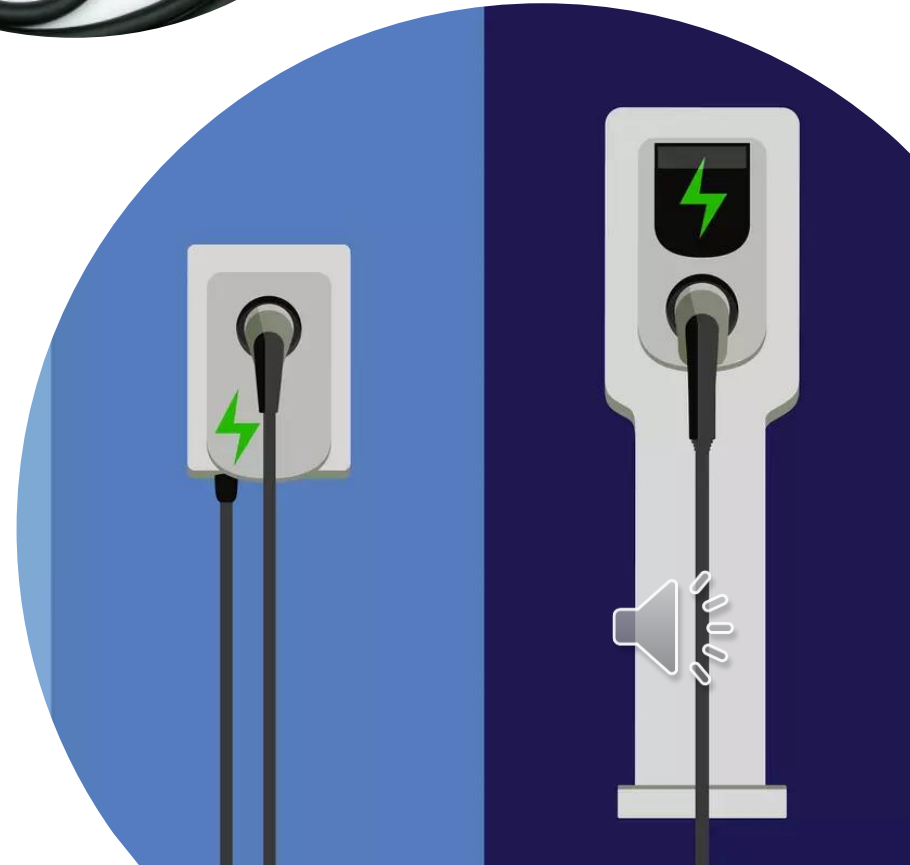
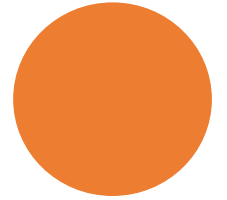
Vans will charge at night
(off-peak)



One Level 2 Charger



The vans will charge on
alternate days





Step 2: Charger Location



How many parking spaces are needed for your electric vehicles and for your charging stations?



What is the current
available power at
the location?





Step 3: Future-Proofing

Operators will have the ability to fully electrify their fleets in the near future due to this quickly developing EV market.

During these first steps to electrify, operators should consider future proofing and pre-wiring make ready to prepare for a fully- electrified fleet





Incentives for Medium- and Heavy-Duty Infrastructure

- NJ BPU Medium- and Heavy-Duty EV Charging Program
- *We expect to see utility programs for medium- and heavy-duty fleet electrification infrastructure incentives in the near future.*





Alternative Options



Alternative Fleet Charging Options: Public Charging

Public charging may be a supplement or a replacement to installing your own fleet chargers.

It can be a useful tool for fleet vehicles that have unpredictable schedules or travel long distances from time-to-time.



Alternative Fleet Charging Options: Charging-As-A-Service



Charging-as-a-service is emerging as a new model for charging electric fleets. Charging-as-a-service companies build, manage, and maintain charging infrastructure that is then leased out to electric fleet operators.

NOT YET WIDELY AVAILABLE IN NJ!





Thank you

