Stakeholder Feedback on Fleet Charging Use Cases in NYC

Agenda

- Overview of Task Force
- Why NYC is different & why this is needed
- Likely Use Cases
- Survey link and context

Citywide Fleet Electrification Task Force

- Formed from participants in the November 2024 AEG/ACT Northeast Clean Transportation Summit
- More than a dozen members from private sector, government, advocacy communities

Goal: Understand different needs for different fleets. Develop a set of fleet electrification use cases (last mile, transit, tech service, taxi) to characterize unique needs and define charging options, geographic locations, equity, energy resources, policies, and incentives for each.

- Work to date has focused on building on existing work and brainstorming initial ideas of these different types of use cases

Why NYC is Different & Why This is Needed

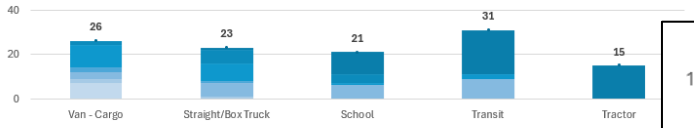
- NYC poses unique charging and parking challenges that fleets do not face anywhere else
- NYC and NYS have aggressive goals for transportation decarbonization
- There are currently opportunities to help shape the policy landscape to improve the economics and viability of zero-emission fleets in NYC and beyond, but we need to know what fleets need to design programs and policies that make the biggest impact for fleet operators

Progress to Date

> To date, we have identified the types of fleets (primarily MHDVs) that we think are most likely to electrify in NYC in the next 5 years, and have started to put together assumptions about what that might look like

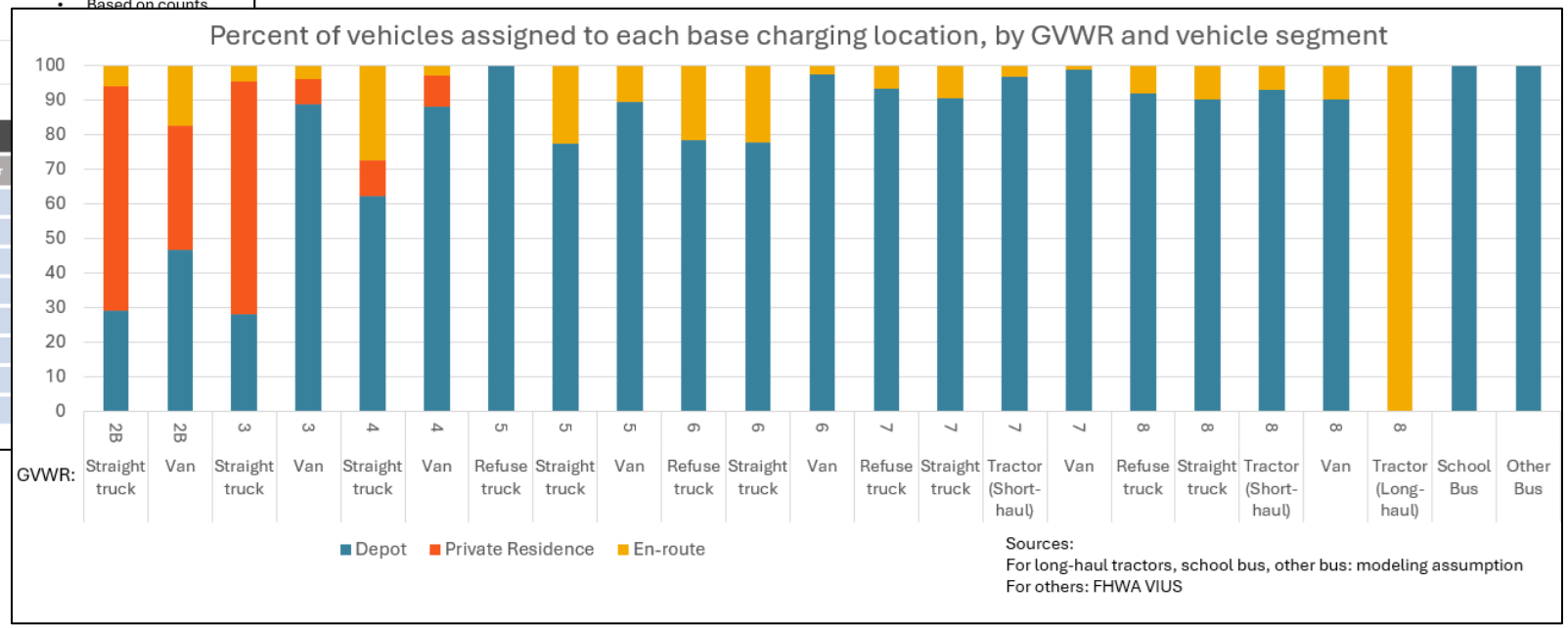
2.1 BEV – Currently Available Models

Currently available BEV Class 2b to 8 Models by GVWR and Vehicle Type as per TRC's Vehicles Database



- Based on counts

BATTERY ELECTRIC VEHICLES (BEV)					
GVWR	Van	Straight Truck	School Bus	Other Bus	Tractor
Class 2b: 8,501–10,000 lbs.	7	0	0	0	0
Class 3: 10;001 - 14;000 lbs.	2	1	0	0	0
Class 4: 14;001 - 16;000 lbs.	3	6	6	9	0
Class 5: 16;001 - 19;500 lbs.	2	1	0	0	0
Class 6: 19;501 - 26;000 lbs.	10	8	1	2	0
Class 7: 26;001 - 33;000 lbs.	2	6	4	0	0
Class 8: 33;001 lbs. and above	0	1	10	20	15
Total	26	23	21	31	15



Focus Use Cases:
Pickups, Vans, Small Box Trucks

- **Class 2b-3 pickup trucks**
  - Typically park in driveways or on-street
  - Likely to travel to different locations every day
  - Likely to be highly reliant on residential L2 and public DCFC charging, similar to LDVs
  - Most fleets currently have one or two pickup trucks in their operation. This is a great low hanging fruit
- **Class 2b-5 delivery vans and non-CDL box trucks**
  - *Service providers (e.g., electricians, HVAC contractors)*
    - Likely to park at either residential parking or a depot, convenient to charge overnight but sometimes may be called out for emergencies.
  - *Parcel/last-mile delivery*
    - Predictable routes, with most parking/charging at a depot. However in NYC there is limited space in IBZs for parking/charging.
  - *Rental trucks/trucks for excess capacity*
    - Potential to electrify if fleets have a depot/property and other vehicles they are electrifying, but this use case poses a challenge for short-term rentals/irregular EV drivers because of a lack of infrastructure. May need public charging.
  - Many of these vehicles park on-street in NYC; even if there are depots, they are often over-capacity
  - These vehicles could shift to making overnight deliveries, which could lead to more en-route charging (provided NYC builds out neighborhood and micro distribution delivery network)

Focus Use Cases: Straight (Box) Trucks

> Class 4-6 straight (box) trucks
  - *Fixed-route deliveries (distributors/wholesalers)*
    - Tend to go to a smaller number of distinct sites over the course of a day, but may do multiple runs throughout the day
  - *Food delivery vehicles*
    - Refrigerated vehicles can be difficult to electrify (this segment is particularly large in NYC)
  - Depot charging is most likely for these vehicles, and they could do opportunity charging upon returns to depots or at destinations they frequent.
    - Vehicles that run their lift gate frequently throughout the day will be a challenge
  - These vehicles may require multiple charging sites and are good candidates for shared charging depots at distribution centers/IBZs

> Class 7/8 trucks
  - Tend to use the truck as the warehouse after leaving the terminal (vs. smaller trucks that do multiple runs to the terminal each day)
  - Class 7/8 short haul tractors are similar to straight trucks but require more space/pull-through charging
  - Depot charging and charging at frequent destinations are both good options

Focus Use Cases: Buses

- Class 8 transit buses
  - NYCT is investing in charging at depots and en-route charging
  - Very high power levels and large number of buses per depot may pose electrical challenges
- Class 4 and Class 7/8 school buses
  - While most school buses return to depots, charging at depots can be challenging because of the power required and the physical space available for charging stations
  - Shared charging hubs could be of particularly high value in NYC
  - There is also a strong potential common benefit of shared charging infrastructure with other truck types in proximity, as many school buses have depots near truck depots
- Class 4-5 shuttle buses
  - Wide range of use cases and charging scenarios – we are eager to learn more about these!

We Want Your Input and Feedback!

Are we on the right track?

We have developed a feedback form that you can complete to share your expertise on one or more of these use cases. **Please provide feedback by next Friday, May 23.**

https://docs.google.com/forms/d/e/1FAIpQLScwwkC0z0QVVkcr_5jVohg63EpdCqAl3NpnNHGLexDx-3VTYA/viewform