CITY OF CAMBRIDGE

September 2025

Prepared By
The City of Cambridge Clean Fleet Committee

FY25 Clean Fleet Annual Report

Report Contents

Overview

The City of Cambridge has committed to achieving net zero emissions for municipal operations by 2050. The City's goals align with the Commonwealth of Massachusetts' commitment to net zero emissions by 2050 and the Metro Mayors Climate Task Force commitment to carbon neutrality by 2050.

As a dense city of 121,000 residents in six square miles, the bulk of Cambridge's greenhouse gas emissions comes from its buildings. However, reducing vehicle emissions will mitigate the impacts of climate change and improve local and regional air quality, providing public health benefits and promoting health equity.

The City previously set, and exceeded, a 2020 greenhouse gas emission reduction goal for municipal operations and established a 75% reduction target for 2030 from a 2008 baseline.

This is the third Annual Report of Cambridge's municipal Clean Fleet program and will continue to serve as an example of leadership for public and private fleets and help others learn from our experiences.

Introduction

On February 21, 2023, the City of Cambridge issued a citywide Clean Fleet Policy to accelerate the transition to electric vehicles. The policy contains greenhouse gas emission targets, acquisition guidelines and a plan for the installation of charging stations and electrical infrastructure. While working to accelerate the adoption of electric vehicles, the policy also ensures that vehicles will be able to perform necessary functions such as 24/7 snow operations and have regional repair shop capability and charging infrastructure available.

The City established a Clean Fleet Committee (CFC) to support the implementation of this Policy. It comprises the following City staff:

- David Brown (Deputy Superintendent, Police Department)
- John Cotter (Assistant Chief, Fire Department)
- John Keeter (Fleet Manager, DPW)
- John Nardone (Commissioner, DPW)
- Thomas O'Neill (Climate Programs Coordinator, Office of Sustainability)
- Irina Sidorenko (Project Manager for Energy & Sustainability, DPW)

As part of the Clean Fleet Policy, the City committed to preparing an annual report. This report describes progress toward the Policy goals and provides updates through June 30, 2025. The report includes:

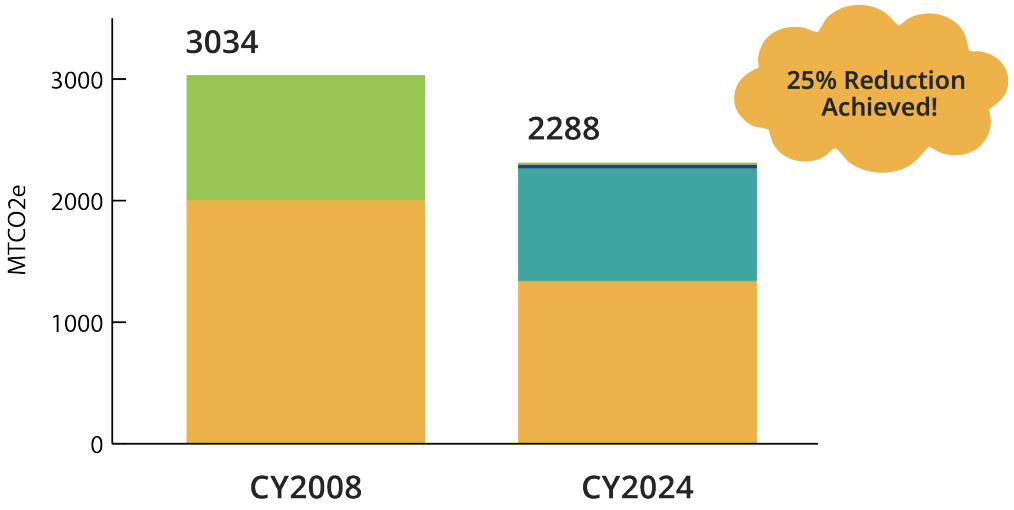
- Description of the City's actions in implementing this Policy over the past year.
- Progress in achieving Policy targets.
- List of zero- and low-emission vehicles that have recently become available on the market and/or are good candidates for City use. This will help encourage fleet standardization and development of expertise among staff.
- Recommended changes to the Policy.

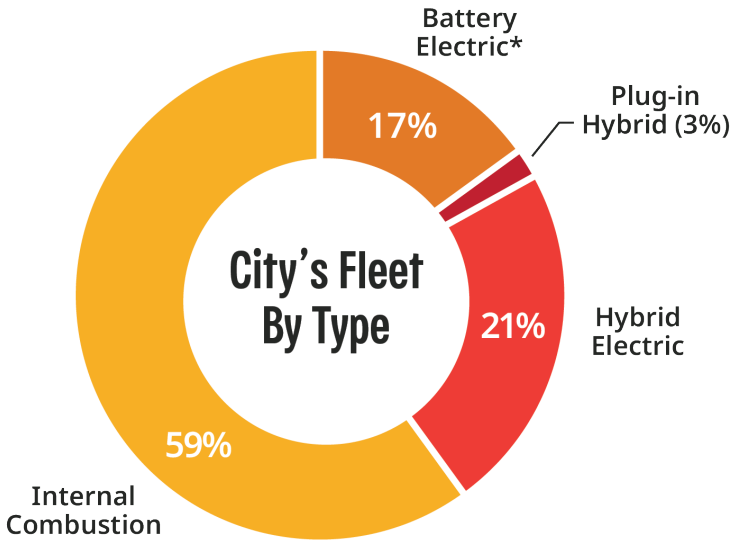
City's Fleet Composition: 389 Vehicles

Fleet Emissions by Fuel: CY08 vs CY24

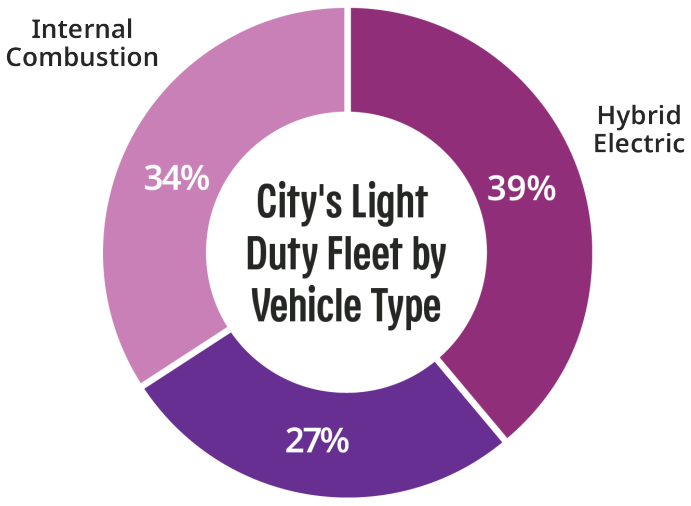
MTCO2e (metric tons of carbon dioxide equivalent)

- Gasoline
- Diesel
- Biodiesel
- Electric



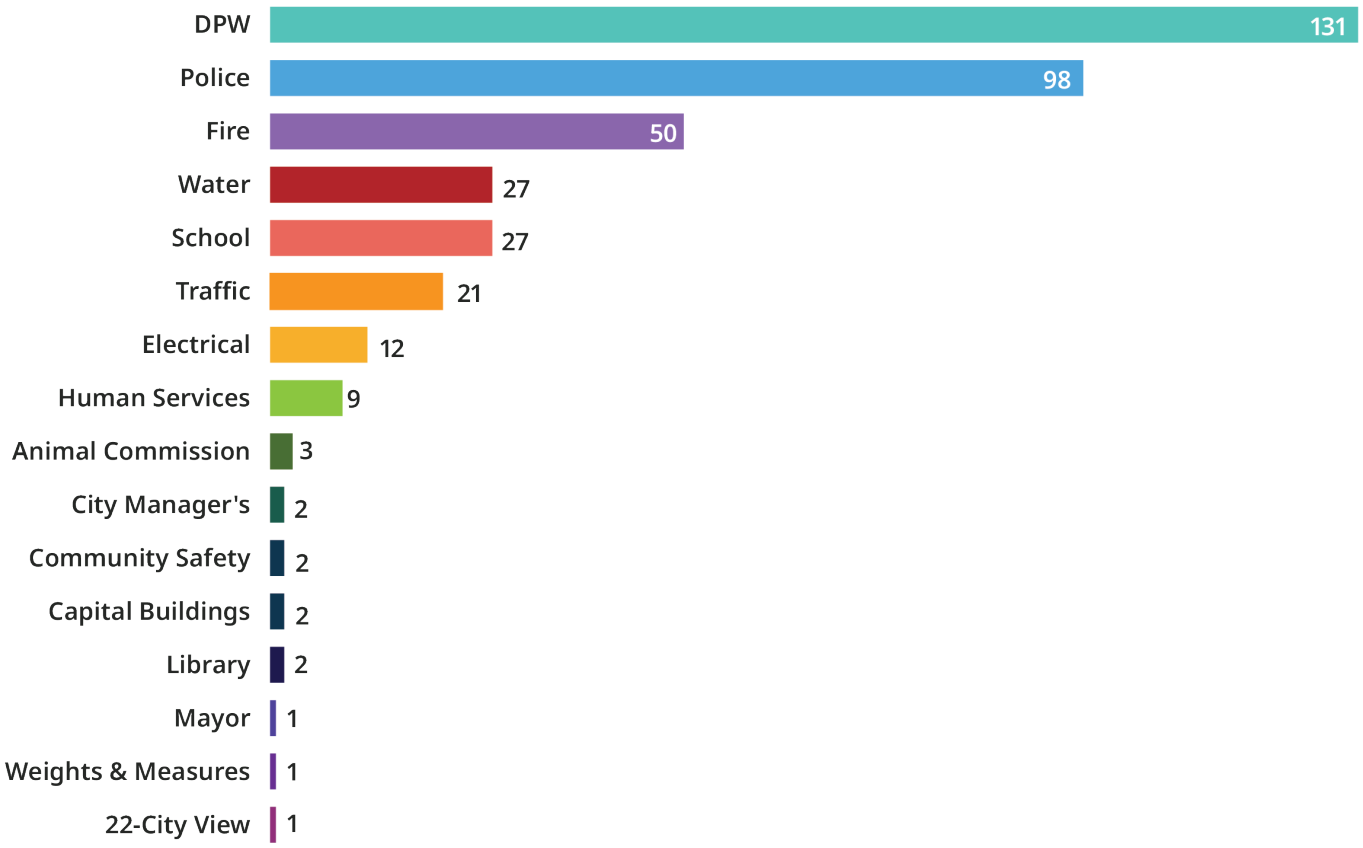


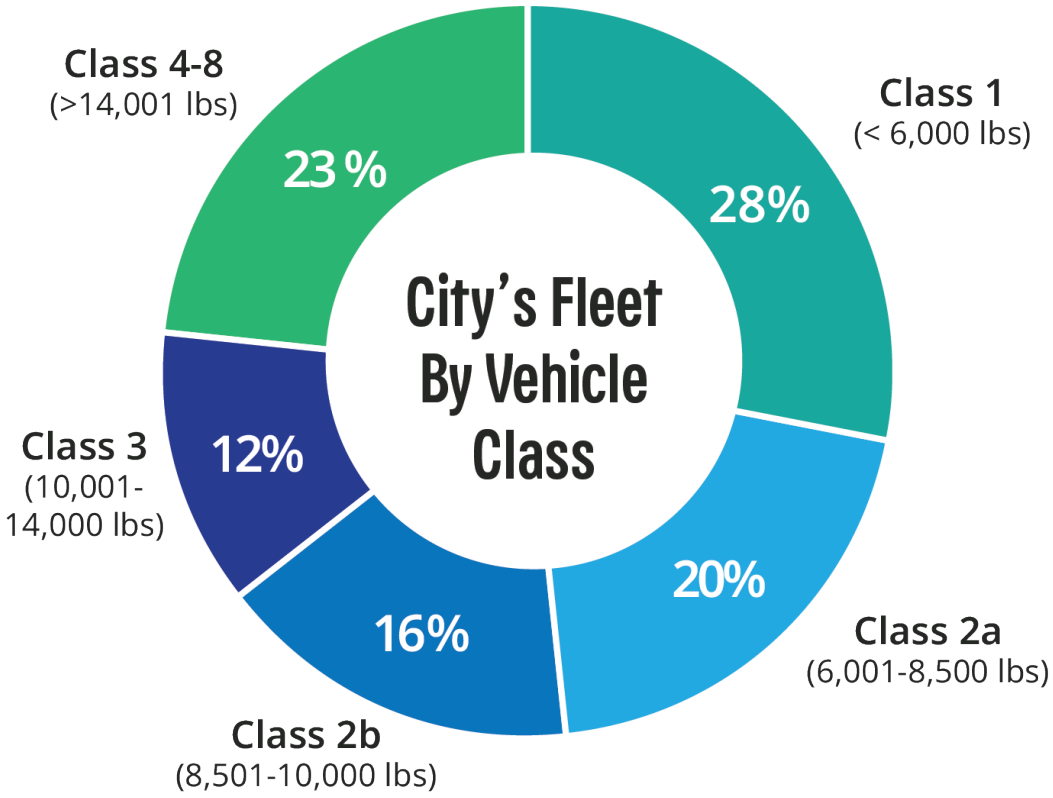
*Includes Awaiting Delivery



Battery Electric / Plug-in Hybrid

City's Fleet By Departments





The U.S. EPA defines vehicle categories by Gross Vehicle Weight Rating (GVWR) for the purposes of emission and fuel economy certification. EPA also classifies vehicles as Light Duty (GVWR < 8,500 lbs) or Heavy Duty (GVWR > 8,501 lbs).

Achieved Targets

Electric Vehicle Charging Infrastructure Target

The City shall increase the number of electric vehicle charging station ports for fleet use to a total of 30 in 2025

2025 Target Achieved!

The City has installed 73 fleet charging ports at various fleet locations.

Next Target: 90 ports in 2030

Greenhouse Gas Emissions Reduction Target

2008: Baseline
2025: 20% reduction, stretch target of 25%

2025 Stretch Target Achieved one year ahead of schedule

2024 emissions from the municipal fleet were 25% lower than the 2008 baseline.*

*The City reports on the Clean Fleet program progress on a fiscal year basis, but reports emissions data on a calendar year basis

Next Target: 2030: 55% reduction

In-Progress Targets

Vehicle Category Ownership Targets

01 75% zero emission Light Duty vehicles (LDV) (< 8,500 lbs) by June 30, 2030, stretch target of 100%

On Track to Reach Target

Of the 187 Light Duty vehicles, there are currently 43 Battery Electric vehicles (BEV) and 8 Plug-in Hybrid Electric Vehicles (PHEV) – 27% of LDV fleet.*

Since adopting the policy in February 2023, the City has acquired or leased 67 BEVs and 11 PHEVs*. All passenger vehicle purchases under 6,000 lbs were battery electric.

* includes awaiting delivery

02 100% zero emission Marked Police Cruisers by June 30, 2035

On Track to Reach Target

35 Marked Police Cruisers, currently 3 BEVs – 9% of fleet

The City has acquired two additional marked vehicles: Ford F-150 Lightning (Enforcement) and Ford E-Transit (Patrol Wagon). There are 11 total* BEVs in the Police Department's fleet.

* includes awaiting delivery

03 100% zero emission Solid Waste Collection vehicles by June 30, 2035

On Track to Reach Target

13 active Solid Waste collection vehicles, currently 3 BEVs, awaiting 1 BEV – 31% of fleet.

Implementation Actions Over the Past Year

Department Spotlights

The City of Cambridge continues to advance its clean fleet strategy through coordinated efforts across multiple departments. Each department has approached fleet electrification based on its unique operational needs, while sharing a common goal of reducing emissions, lowering maintenance costs, and piloting new technologies that support long-term sustainability. From public safety to transportation operations, these efforts demonstrate the City's commitment to leading by example as it transitions toward a cleaner, more efficient municipal fleet.

Cambridge Police Department

The Cambridge Police Department (CPD) continues to make meaningful progress toward electrifying its fleet, with **more than half of all vehicles (56%) now consisting of hybrid, plug-in hybrid, or battery-electric models.** The Department's current all-electric lineup includes **four Ford Mach-Es, four Chevy Blazer EVs, and one Ford F-150 Lightning**, with two additional Blazer EVs on order.

To support these vehicles, CPD operates **seven charging ports**—two DC fast-charging ports with a combined 200 kW capacity and five Level 2 ports.

A Ford Mach-E was initially deployed as a marked Traffic unit but later reassigned to Community Relations after officers reported limited cabin space, particularly for taller personnel wearing full uniforms. This adjustment reflects a key lesson in the Department's approach: while speed and performance are notable, **comfort and functionality are essential for officers who spend long hours inside their vehicles.**

"People can be resistant to change," said Sergeant Robert Reardon. Piloting new vehicle models before citywide adoption allows us to better understand what works for our officers and operations." Overall, feedback from drivers has been positive, with many noting the EVs' quiet operation and smooth handling. As new marked Blazer EVs are introduced later this year, the Department plans to document user experiences to inform future fleet decisions.

Cambridge Fire Department

The Cambridge Fire Department (CFD) continues to lead by example in integrating clean technologies across its administrative and support fleet. The Department currently operates a **mix of all electric, hybrid and plug-in hybrid vehicles,** including a plug-in hybrid Ford Escape used by Fire Prevention, two Ford Lightnings for Special Operations, a Ford Mustang for Fire Prevention, a Ford Lightning with a lift gate for Mechanics, an E-Transit Van for Technical Services, and a fully electric hazmat truck reserved for emergency use.

Early progress in fleet electrification was supported by grant funding, with **four vehicles purchased through various state and federal programs,** including three from the Hazmat Grant. The Department has also taken advantage of state rebates to expand its efforts, and several new vehicles are on order including a Ford Lightning for the EMS Captain and a Jeep Grand Cherokee plug-in hybrid for the Chief.

The City continues to expand charging infrastructure across fire stations, with dual head level 2 stations installed at multiple sites and additional charging planned at Headquarters, which will fea-

ture nine chargers when complete. The Department is also preparing for the possibility of **piloting a plug-in hybrid pumper truck,** contingent on the completion of adequate charging infrastructure at key stations.

In addition to EV integration, CFD has adopted **anti-idling technology** across its existing apparatus fleet. Auxiliary Power Units (APUs) allow engines to power lights and electronics on non-emergency calls without running the main diesel engine, significantly reducing emissions and fuel use.

"Every new apparatus we purchase includes this APU technology—it's been a big step forward for us," said Assistant Chief John Cotter. While heavy-duty vehicles remain a challenge to fully electrify, staff vehicles operating within the city have transitioned seamlessly. Cotter noted that staff vehicles have been performing excellently, while the Department continues to balance sustainability with its critical operational readiness needs.

Cambridge Department of Transportation (CamDOT)

The Cambridge Department of Transportation (CamDOT) continues to advance its clean fleet goals through the use of battery-electric and plug-in hybrid vehicles across its operations, enforcement, and engineering divisions. The Department's current fleet includes **three Hyundai Ioniq 5s, two Ford F-150 Lightnings, one Nissan Leaf, and one Subaru Crosstrek plug-in hybrid.** Today, one-third of the CamDOT fleet is fully electric, and half consists of hybrid, plug-in hybrid, or battery-electric vehicles.

To support this transition, CamDOT operates **five charging ports,** including three ABB Terra DC level 2+ chargers at the First St Garage and two level 2 chargers at the Annex. Staff report a **highly positive experience**, emphasizing the convenience of charging directly at the parking site and the minimal downtime compared to gas-powered vehicles. Drivers note that the vehicles' performance and reliability meet all operational needs even during winter months.

CamDOT's transition has been accelerated through **strategic vehicle leasing,** allowing the department to replace multiple older vehicles despite limited capital funding. "Leasing isn't always the cheapest option, but the flexibility and maintenance benefits make it worthwhile," explained Assistant Commissioner Jeff Parenti. Operators particularly appreciate the F-150 Lightning's ability to **power tools and equipment directly from the vehicle battery,** eliminating the need for gas-powered auxiliary units.

Looking ahead, CamDOT plans to continue transitioning to electric vehicles as new models become available, including smaller electric pickup trucks. "Our drivers have embraced the change and no one's nervous about range anymore," said Jeff. "We're proving that electric vehicles can work seamlessly for City operations."

Fueling Systems Upgrades

The City is in the process of upgrading its fueling infrastructure at several key locations, including the DPW Yard, Cambridge Cemetery, Fire Headquarters and the East Cambridge Fire House. At the Cambridge Cemetery, the project will involve replacing the fuel tank and pumps, while at the DPW Yard, the fuel pumps and concrete island will be replaced. Similarly, at the Fire Headquarters and East Cambridge Fire House, the fuel tank and pumps will be upgraded. In addition, a new fuel software system will be installed across all four locations which will improve fuel data tracking, modernize operations and improve efficiency.

Anti Idling Initiative

DPW continues to minimize vehicle idling, focusing on reducing fuel consumption, GHG emissions and air pollution. DPW held another round of meetings with all major divisions and their staff in the Spring of 2025. Division supervisors receive weekly reports that include notifications of longer-than-normal vehicle idling.

DPW Fleet Maintenance is installing new equipment on fleet vehicles that rely on idling to power emergency lights. This upgrade will enable the emergency lights to operate without the need to keep the engine running.

In 2021, the Cambridge Fire Department (CFD) piloted the use of an Auxiliary Power Unit (APU) on fire apparatus to reduce idling, lower fuel consumption, and cut emissions. Building on the success of that initiative, two additional fire pumpers equipped with APU technology were delivered in 2023. The current fleet with this technology includes Ladder 2, a 2021 Pierce ladder truck, along with Engine 2 and Engine 5, both 2023 Pierce pumpers. All new apparatus purchases include APU advanced technology.

Specialized Trainings

Transitioning to electric vehicles (EVs) and adopting new technologies require comprehensive training particularly for the fleet maintenance staff. Mechanics must develop specialized skills to safely and efficiently maintain, diagnose, and repair EVs. To support this need, DPW Fleet Maintenance hosted training sessions in May and June 2025 with the Advanced Vehicle Technology Group. It was a 2-day training (16 hours total) providing onsite EV instruction and hands-on training for DPW technicians.

Biodiesel Use

All City Departments use a more sustainable, regionally sourced biodiesel blend – a form of diesel fuel partly derived from waste grease, oils and fats. Use of biodiesel reduces particulate matter (PM), carbon monoxide (CO) and hydrocarbons (HCs) emissions, reducing air pollutants and providing a healthier environment for our residents and fleet mechanics.

Knowledge Exchange

Cambridge Public Works staff have actively shared the City's fleet electrification journey at a variety of industry and policy forums. Recent examples include presentations at the Sustainable Fleet Technology Conference and the Clean Air Northeast 2025 Partners Meeting, with additional engagements planned for the Northeast Green Communities Summit in November 2025.

At the September 2025 Clean Air Northeast Partners Meeting, the Department hosted a site visit where the DPW and Fire Department highlighted their leadership in medium- and heavy-duty fleet electrification. Vehicles on display included an

all-electric refuse truck, an electric rack-body truck, and the Northeast's first all-electric hazmat vehicle. The event, held at the Volpe National Transportation Systems Center, convened emissions-reduction experts, community leaders, and representatives from government and nonprofit organizations throughout the region. Discussions covered a wide range of topics such as alternative fuels, funding opportunities, port and rail initiatives, micromobility, and emerging nonroad and marine technologies.

Tax credits / Direct Pay

The City received a Direct Pay reimbursement check from the federal government totaling $140,000 for electric vehicle purchases made in 2024. An application will also be submitted for 2025 purchases through September 30. The federal government just eliminated the Direct Pay program, so this is the last year they will be available.

Challenges and Recommended Changes

Challenges

Meeting the target of 75% zero-emission light-duty vehicles by June 30, 2030 may prove challenging for the City, particularly given the current uncertain financial climate. Careful planning and phased implementation will be essential to progress toward this goal, especially as tax credits expire. The loss of these financial incentives, coupled with broader budgetary constraints, presents significant hurdles that will require creative strategies and strong long-term planning to overcome.

The motor vehicle industry's transition to electric vehicles continues to face challenges in the medium-duty category, as well as among smaller pickup trucks and electric trucks capable of plowing. While passenger EVs are becoming more widely available, the market for work-ready vehicles that can meet municipal and commercial demands remains limited. Medium-duty options are still in early stages of production, often with long lead times, high upfront costs, and limited dealer availability. Similarly, smaller pickups that would suit fleet operations are not yet widely manufactured at scale, restricting procurement choices. The situation is even more constrained for electric trucks equipped to handle snow plowing, where few models have been tested and proven under real-world winter operations. These gaps create barriers for fleet electrification in cities like Cambridge where snow plowing is an essential operational need.

Recommended Changes

The Clean Fleet Committee is proposing to amend the policy and adjust its target metric in Part I, B 2. from **"Vehicle Category Ownership"** to **"Vehicle Category Acquisition."** Our fleet strategy relies heavily on leased vehicles, particularly for electric models, which allows us to accelerate electrification while managing costs and technology advances. Measuring by ownership alone does not accurately reflect our progress toward clean fleet goals, since a significant share of our electric and low-emission vehicles are acquired through leasing.

Additionally, the Clean Fleet Committee is proposing to amend the following language in the policy document:

Part I, C 3 (on p.3) change "it is available **for purchase"** to "available **for acquisition"?**

Part I, E 1 (on p.5) change "The Review Form shall include the need for the purchase" to "The Review Form shall include the need for the acquisition"?

Current List of City Owned and Leased BEVs and PHEVs

Please use the links below to access Alternative Fuels Data Center's list of zero and low-emission model year 2025 vehicles.

Model Year 2025 Alternative Fuel and Advanced Technology Vehicles: https://afdc.energy.gov/vehicles/search/download.pdf?year=2025

Electric	Plug-in Hybrid

Department	Type	Year	Make	Model
22-CityView	Electric	2023	Ford	*E-Transit*
Animal Commission	Electric	2022	Ford	*E-Transit*
Animal Commission	Electric	2022	Ford	*E-Transit*
Capital Buildings	Electric	2025	Ford	*Mach-E*
Capital Buildings	Electric	2025	Ford	*Mach-E*
City Manager	Electric	2023	Hyundai	*Ioniq 5*
City Manager	Electric	2023	Hyundai	*Ioniq 5*
Community and Safety	Electric	2023	Hyundai	*Ioniq 5*
Community and Safety	Electric	2023	Hyundai	*Ioniq 5*
DPW	Electric	2023	SEA Electric	*5e*
DPW	Electric	2024	Chevrolet	*Blazer EV*
DPW	Electric Plug-in Hybrid	2022	Ford	*Escape Plug-In Hybrid*
DPW	Electric Plug-in Hybrid	2022	Ford	*Escape Plug-In Hybrid*
DPW	Electric	2023	Ford	*E-Transit*

Department	Type	Year	Make	Model
DPW	Electric	2023	Ford	*E-Transit*
DPW	Diesel/Plug-in Hybrid	2021	International	*HV607*
DPW	Diesel/Plug-in Hybrid	2021	International	*HV607*
DPW	Diesel/Plug-in Hybrid	2021	International	*HV607*
DPW	Electric	2023	Hyundai	*Ioniq 5*
DPW	Electric	2023	Hyundai	*Ioniq 5*
DPW	Electric	2023	Hyundai	*Ioniq 5*
DPW	Electric	2023	Hyundai	*Ioniq 5*
DPW	Electric	2023	Hyundai	*Ioniq 5*
DPW	Electric	2023	Hyundai	*Ioniq 5*
DPW	Electric	2023	Hyundai	*Kona*
DPW	Electric	2023	Hyundai	*Kona*
DPW	Electric	2024	Hyundai	*Kona*
DPW	Electric	2024	Mack	*LR*
DPW	Electric	2025	Mack	*LR*
DPW	Electric	2024	Mack	*LR*
DPW	Electric	2023	Ford	*Mach-E*
DPW	Electric Plug-in Hybrid	2024	Toyota	*RAV4 Prime*
Electrical	Electric	2024	Ford	*F-150 Lightning*
Fire	Electric Plug-in Hybrid	2022	Ford	*Escape Plug-In Hybrid*

Department	Type	Year	Make	Model
Fire	Electric	2023	Ford	*F-150 Lightning*
Fire	Electric	2022	Ford	*F-150 Lightning*
Fire	Electric	2022	Ford	*F-150 Lightning*
Fire	Electric	2024	Ford	*Mach-E*
Fire	Electric	2025	Ford	*E-Transit*
Fire	Electric	2023	International	*MV60E*
Human Services	Electric	2022	Ford	*Transit E350*
Mayor	Electric Plug-in Hybrid	2024	Mazda	*CX-90*
Police	Electric	2025	Chevrolet	*Blazer EV*
Police	Electric	2024	Chevrolet	*Blazer EV*
Police	Electric	2024	Chevrolet	*Blazer EV*
Police	Electric	2024	Chevrolet	*Blazer EV*
Police	Electric	2024	Ford	*F-150 Lightning*
Police	Electric	2023	Ford	*Mach-E*
Police	Electric	2022	Ford	*Mach-E*
Police	Electric	2022	Ford	*Mach-E*
Police	Electric	2022	Ford	*Mach-E*
School	Electric	2017	LION	*E LION*
School	Electric	2023	Ford	*E-Transit*
School	Electric	2023	Ford	*E-Transit*
School	Electric	2023	Ford	*E-Transit*
School	Electric	2023	Ford	*E-Transit*

Department	Type	Year	Make	Model
School	Electric	2023	Ford	*E-Transit*
School	Electric	2024	Ford	*E-Transit*
School	Electric	2023	Ford	*Mach-E*
School	Electric	2023	Ford	*E-Transit*
Traffic	Electric Plug-in Hybrid	2021	Subaru	*Crosstrek*
Traffic	Electric	2024	Ford	*F-150 Lightning*
Traffic	Electric	2023	Ford	*F-150 Lightning*
Traffic	Electric	2023	Hyundai	*Ioniq 5*
Traffic	Electric	2023	Hyundai	*Ioniq 5*
Traffic	Electric	2023	Hyundai	*Ioniq 5*
Traffic	Electric	2023	Nissan	*Leaf*
Water	Electric	2024	Chevrolet	*Blazer EV*
Water	Electric	2024	Chevrolet	*Blazer EV*
Water	Electric	2023	Ford	*E-Transit*

Awaiting Delivery

DPW	Electric	2025	Mack	*LR*
DPW	Electric	2025	Chevrolet	*Blazer EV*
DPW	Electric	2025	Ford	*F-150 Lightning*
Fire	Electric Plug-in Hybrid	2025		
Fire	Electric	2025	Ford	*F-150 Lightning*

Department	Type	Year	Make	Model
Water	Electric Plug-in Hybrid	2025	Toyota	*RAV4 Prime*
Police	Electric	2025	Chevrolet	*Blazer EV*
Police	Electric	2025	Chevrolet	*Blazer EV*