Information Report Summary

SUBJECT: Green Fleet Strategy Update

TO: Council Information Package (CIP)

FROM: Public Works
Roads, Parks and Forestry

Report Number: PWS-35-25

Wards Affected: N/A

CIP date: July 11, 2025

Note: at the request of a member of council, this information report can be pulled from the CIP for consideration at a future committee/council meeting.

Executive Summary

Purpose of report:

- To provide an update on the implementation of the City's Green Fleet Strategy which was approved in late 2023.

Key findings:

- Light duty hybrid vehicles continue to be procured in accordance with the initial phase of the conversion strategy.
- Demos for small handheld equipment with various manufacturers are ongoing with hand tools converted to battery operated equipment where feasible.
- Where feasible, vehicle engines are being downsized with the same performance (i.e. from a V6 gas engine to four-cylinder trucks) reducing emissions in the truck class.
- Overall implementation of the Green Fleet Strategy is progressing with the City moving in step with the ever-evolving challenges associated with the electric fleet market and industry conditions.

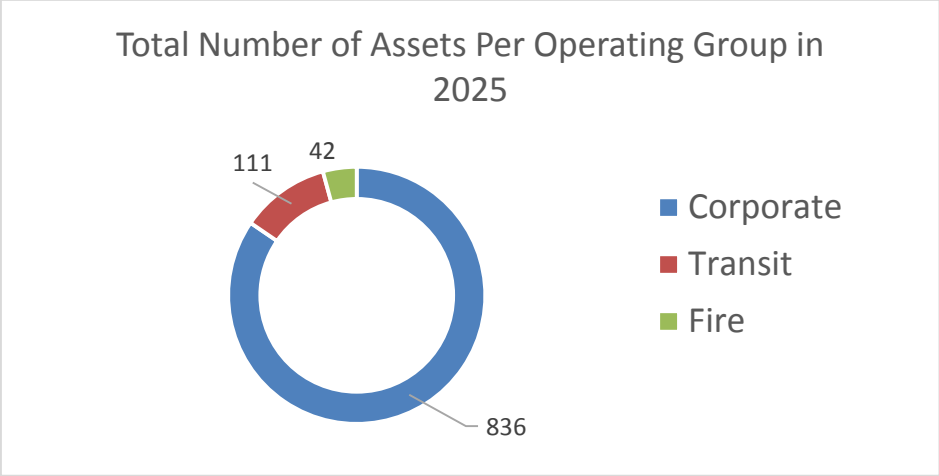
Background

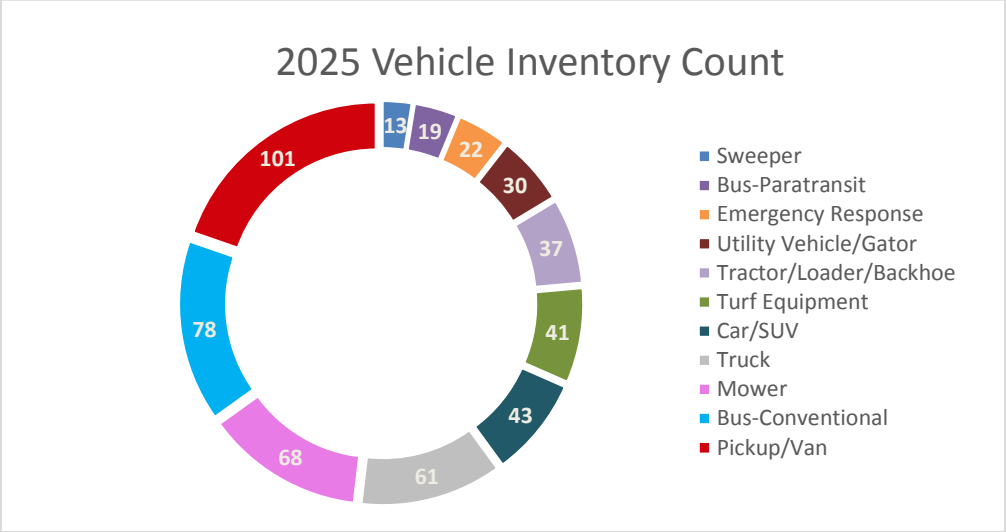
The Burlington Green Fleet Strategy was approved by Council in 2023 as a guide to transition the fleet to low and zero carbon vehicles and equipment. It supports and complements the Corporate Energy and Emissions Management Plan with a target for City operations to be net carbon neutral by 2040.

The plan is contingent on funding as well as advancements in zero-emission technologies for medium duty, heavy duty and utility vehicles while not impacting existing service capabilities. This strategy therefore needs to be reviewed and updated on a circa 5-year cycle as technology in the automotive industry will continue to develop rapidly.

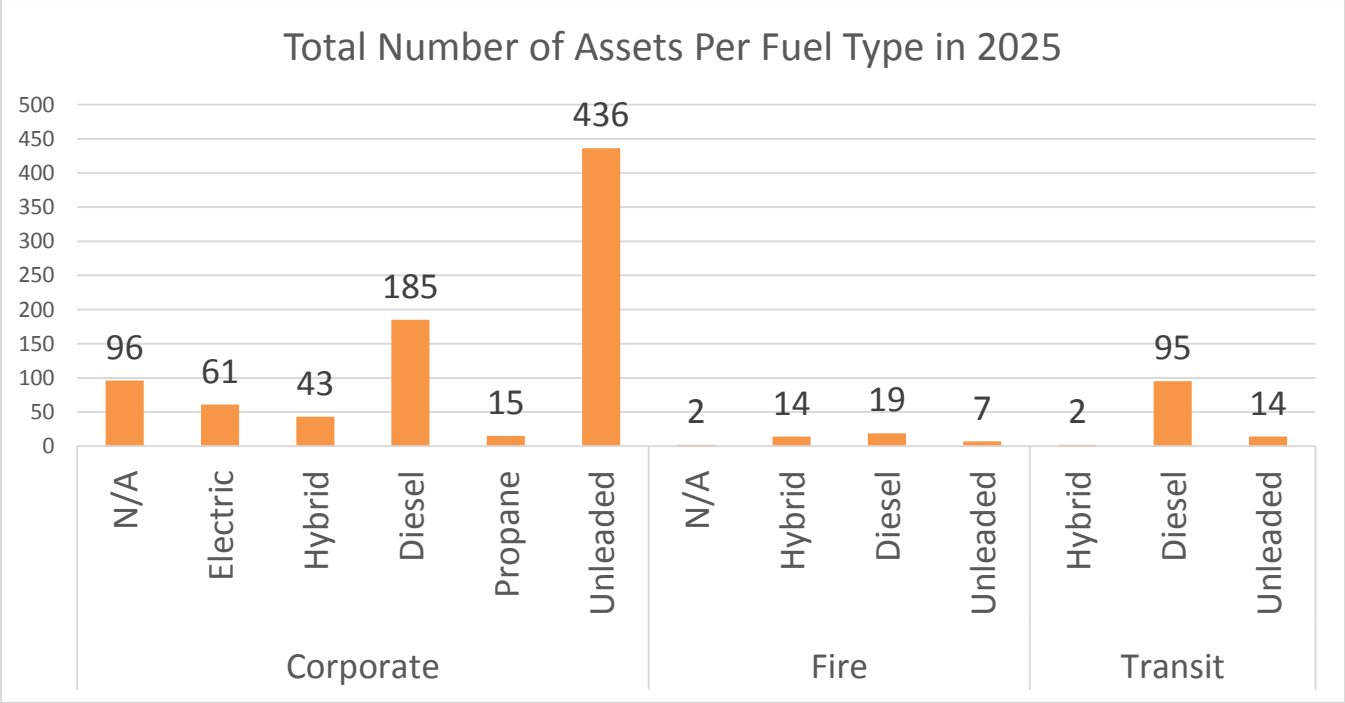
Status

The number of vehicle and equipment assets continues to grow as services throughout the City are expanded and additional units are required to meet departmental service levels. Fleet ensures that vehicles and equipment first meet the performance standards required by each service group and that currently available technology meets each department's specifications in accordance with our Green Fleet Strategy. The graph below shows the total number of fleet assets by fleet operating group and the subsequent graph shows our current vehicle count.





The number of vehicles and equipment assets can be broken down into their fuel type by each fleet operating group. The graph below shows the current state of each fleet operating group and their assets by fuel type.



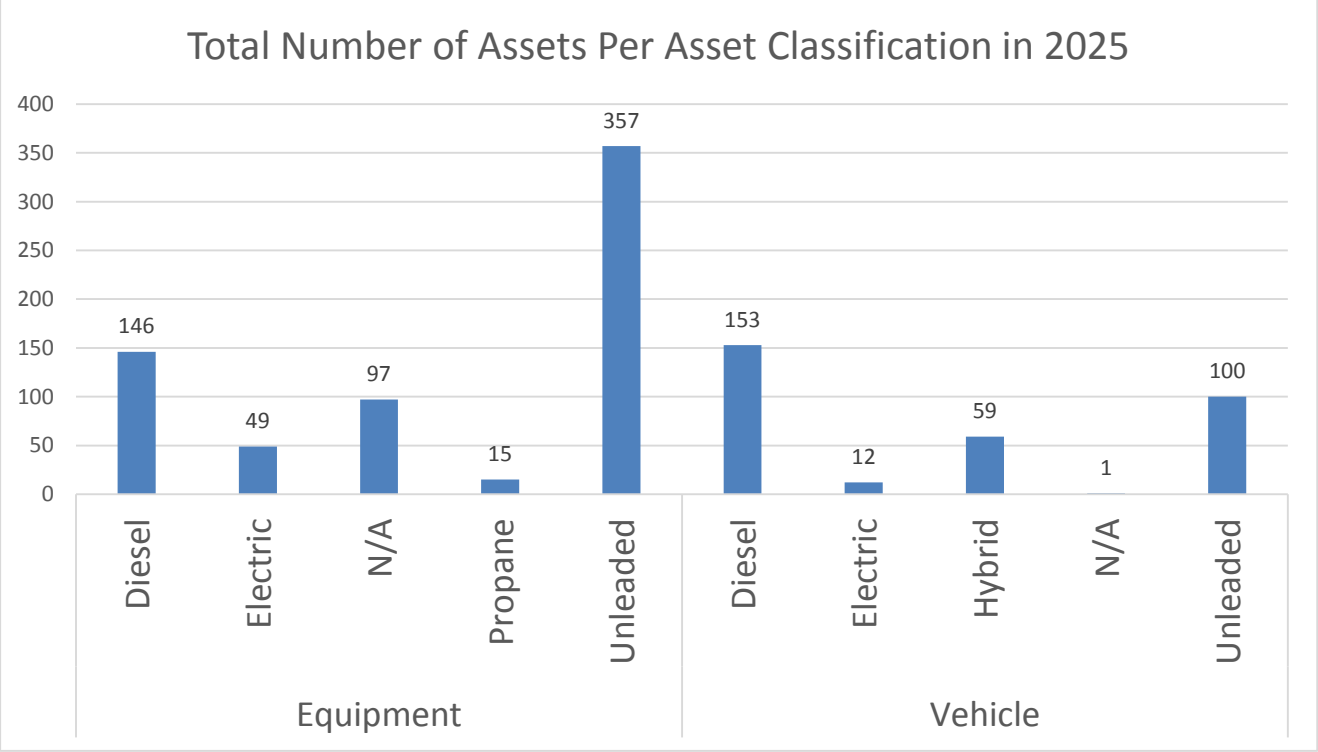
*N/A represent unpowered units in all charts.

Each fleet operating group has different vehicle types that are planned for replacement according to condition, lifecycle and budget.

- Currently, larger vehicles such as fire trucks and buses are scheduled to be fully electrified later in the transition plan as this heavy vehicle technology develops. Fleet staff are following heavy vehicle industry trends by researching and procuring assets

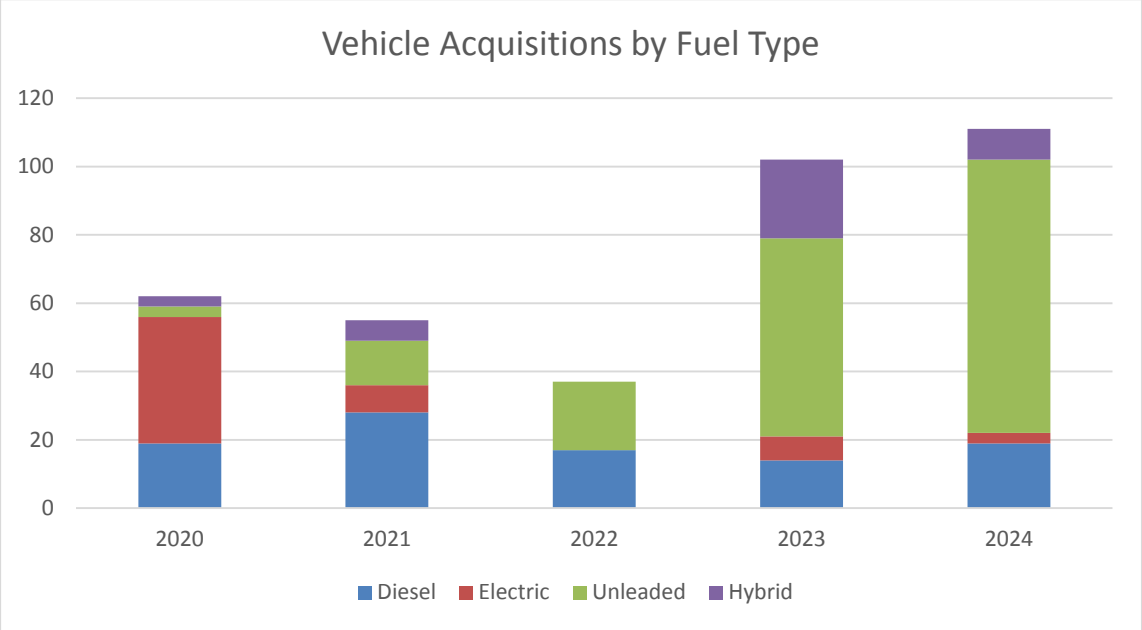
that were once diesel and now gas without sacrificing power or performance where available.

- Where feasible, vehicle engines are being downsized with the same performance (i.e. from a V6 gas engine to four-cylinder trucks) reducing emissions in the medium and heavy-duty truck class.
- Light duty vehicles and handheld equipment are being replaced with hybrid and fully battery-operated technology where possible, depending on usage, its lifecycle stage and the performance it provides.
    - A significant increase in light duty hybrid vehicles was procured in 2024 as the City began to convert its light duty truck and car fleet into hybrid and fully electric assets.
    - Multiple demos of small equipment also took place in 2024/2025 to engage departments with new electric handheld technology which is being procured in 2025.
- The fleet operating groups are procuring additional hybrid and electric vehicles, further converting gas operated assets as shown in the graph below, Total Number of Assets per Asset Classification in 2025.



- The City experienced supply disruptions during the pandemic from 2019 to 2022. However, during this time the City was successful in procuring hybrid vehicles in lieu of battery electric as hybrids had less manufacturing and delivery lead times due to an industry-wide global chip shortage.

- The large amount of internal combustion engine purchases in 2023/24 was due to small equipment renewal which has yet to meet the industrial standard of an electric equivalent as shown in Vehicle Acquisitions by Fuel Type Graph below.
- Overall, implementation of the Green Fleet Strategy is progressing, and the City is moving in step with the ever-evolving electric fleet market and industry conditions as shown below.



References

- Green Fleet Strategy - EICS-06-23
- Corporate Energy and Emissions Management Plan - EICS-08-24

Strategic Alignment

☐ Designing and delivering complete communities

☐ Providing the best services and experiences

☑ Protecting and improving the natural environment and taking action on climate change

☐ Driving organizational performance

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Report Approval:

All reports are reviewed and approved by the Commissioner, Head of Corporate Affairs, Chief Financial Officer, and Commissioner of Legal and Legislative Services/City Solicitor.