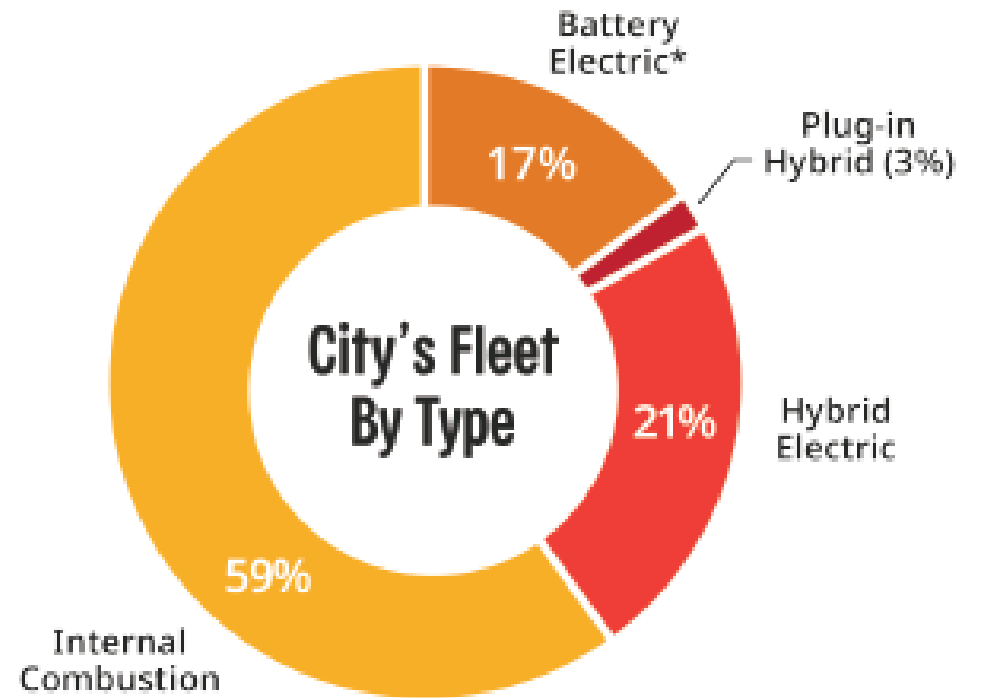
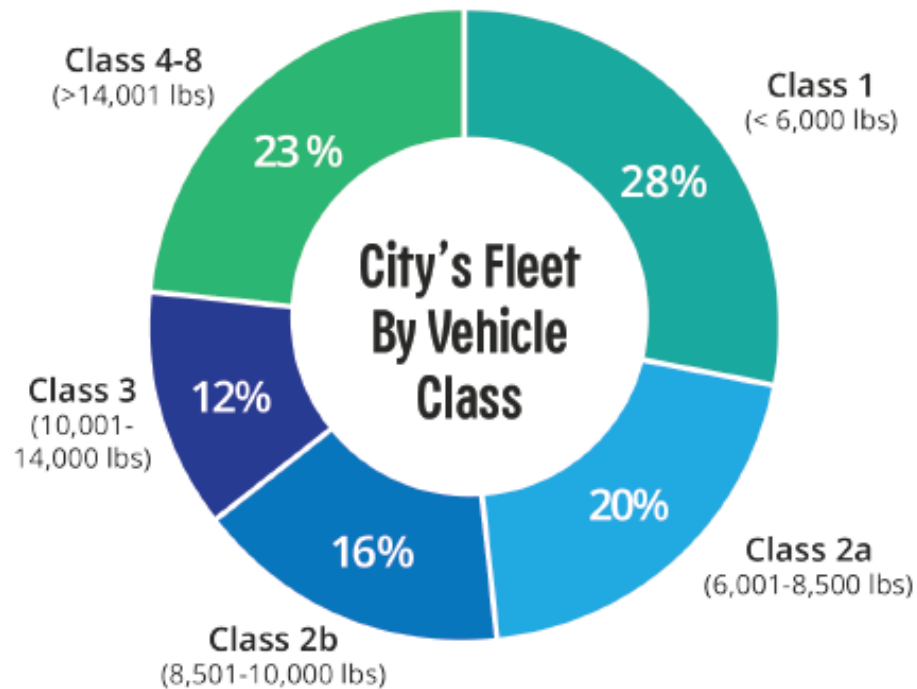


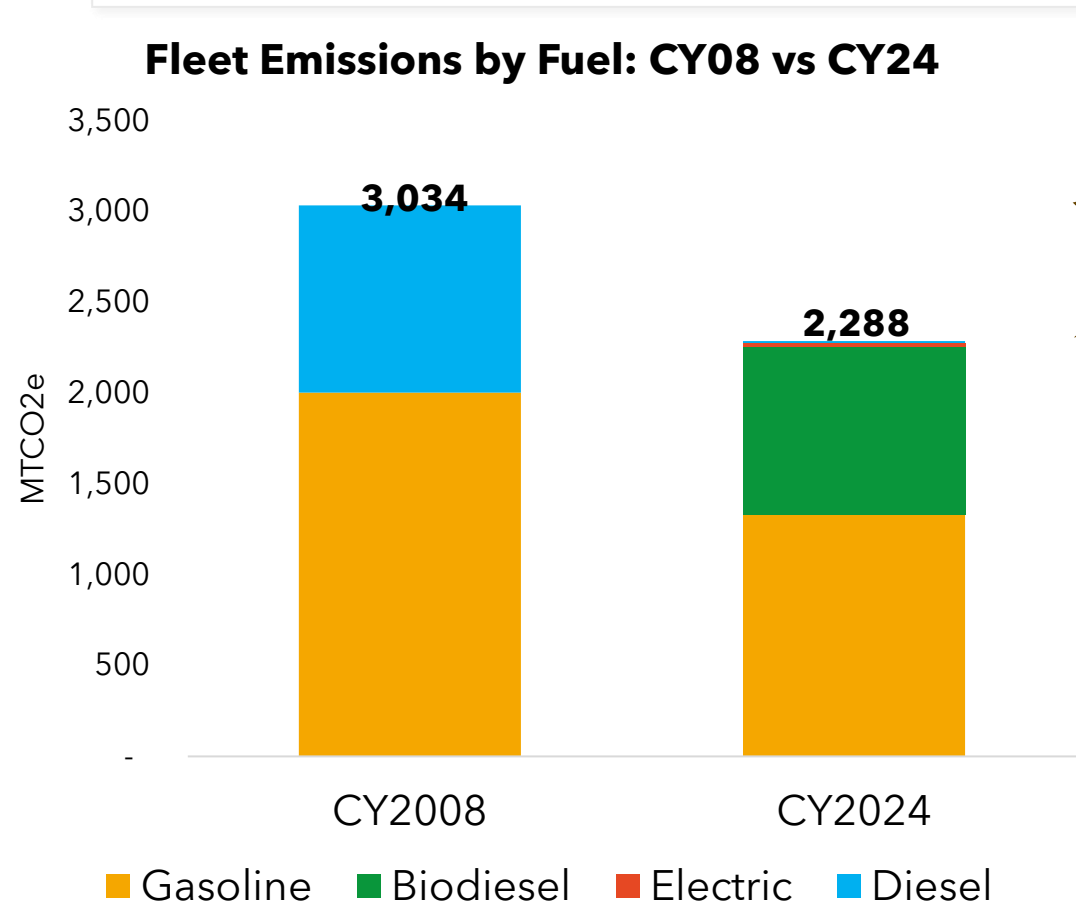
# REDUCING MD/HD FLEET EMISSIONS



# CITY'S FLEET COMPOSITION: 389 VEHICLES



# FLEET GHG EMISSIONS



**25%  
reduction  
achieved**

	CY2008	CY2024
Gasoline	2,004	1,330
Diesel	1,030	10
Biodiesel	-	926
Electric	-	21
	3,034	2,288




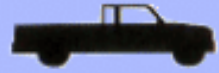




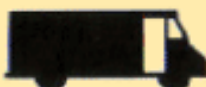





# STRATEGIES FOR REDUCING MD/HD FLEET EMISSIONS

- Fleet Electrification
- Advance Technologies
- Anti-Idling Campaign
- Alternative Fuels



# MEDIUM DUTY (72 TOTAL)

Class 3-6 (GVWR = 10,001 - 26,000 lbs)

<b>Class 3 - 10,001 to 14,000 lbs</b>			
			
Walk-in	Box Truck	City Delivery	Heavy-Duty Pickup
<b>Class 4 - 14,001 to 16,000 lbs</b>			
			
Large Walk-in	Box Truck	City Delivery	
<b>Class 5 - 16,001 to 19,500 lbs</b>			
			
Bucket Truck	Large Walk-in	City Delivery	
<b>Class 6 - 19,501 to 26,000 lbs</b>			
			
Beverage Truck	Single-Axle	School Bus	Rack Truck

Vehicle Class	Total by Class	Vehicle Models
Class 3	44	Ford F 350
		Ford E 350
		Chevy Silverado 3500
Class 4	3	Ford E 450
Class 5	21	Ford F 450
		Ford F 550
		Sea Electric E5
		International CF600
Class 6	4	Ford F 600
		Ford F 800

# HEAVY DUTY (66 TOTAL)

Class 7-8 (GVWR = 26,001 lbs and over)



Vehicle Class	Total by Class	Vehicle Models
Class 7	4	International
		Ford Cargo 8000
		International MV60E
Class 8	62	Pierce Fire Apparatus
		International HV607, 7400
		Peterbilt 348
		Mack LR
		Mack Granite
		Freightliner M2106
		E Lion School Bus



**All-Electric MD/HD Fleet (7):**

Mack LR (3)

Ford E-350

Sea Electric 5e

International MV60E

E Lion School Bus



# Hybrid Electric (HEV) & Plug in Hybrid (PHEV)

## Gasoline HEV Conversions (2) Ford E-350 & E-450



## Diesel PHEV Rubbish Packers (3) International HV607



# ADVANCED VEHICLE TECHNOLOGIES

## Fire Apparatus APUs

CFD piloted an Auxiliary Power Unit (APU) for Fire Apparatus to help reduce idling, save fuel and reduce emissions (1 Ladder and 2 Pumpers)

All new apparatus purchases include APU advanced technology.



## Anti Idling Technology

DPW fleet vehicles that rely on idling to power emergency lights are being upfitted with additional 12V batteries that will enable the emergency lights to operate without the need to keep the engine running.



# PUBLIC WORKS **ANTI-IDLING PROGRAM**

- Launched in 2022
- Idling data from GPS devices (Samsara)
- Seasonal meetings with DPW Divisions' staff and vehicle operators
- Idling alerts and weekly reports to Division Heads





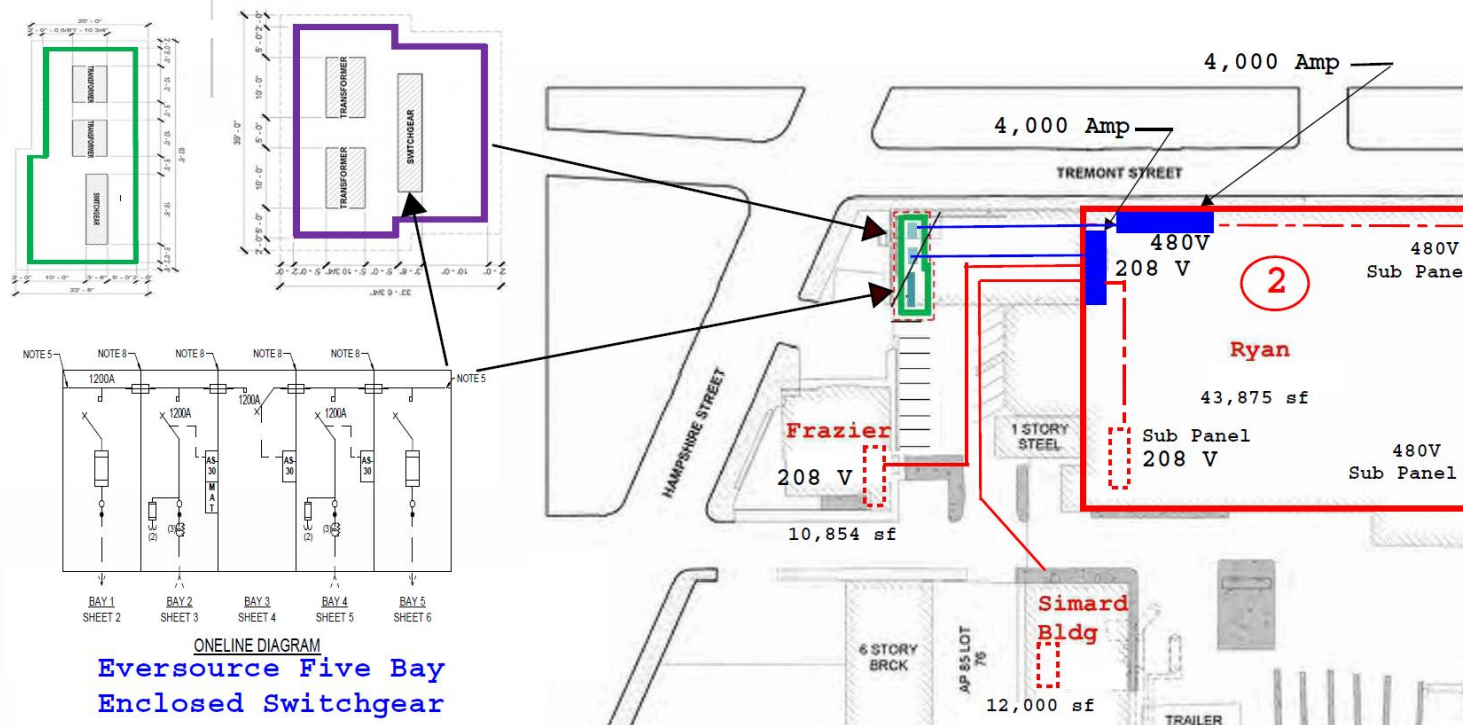
## ALTERNATIVE FUELS - BIODIESEL

All City Departments use a more **sustainable regionally sourced biodiesel B20 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

# FLEET CHARGING

Substation – Cambridge DPW



**CURRENT:** 73 fleet charging ports

## PLANNED SUBSTATIONS:

- **DPW**
  - 1500 KVA 120/208V
  - 2500 KVA 277/480V
- **Fire HQ**
  - 1000 KVA 120/208V

# THANK YOU!

**Irina Sidorenko, Project Manager for Energy & Sustainability**  
**[isidorenko@cambridgema.gov](mailto:isidorenko@cambridgema.gov)**