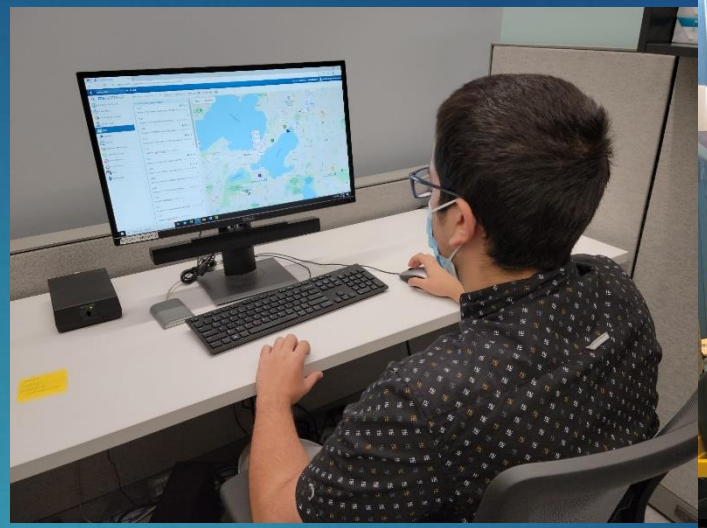
FLEET BY THE NUMBERS

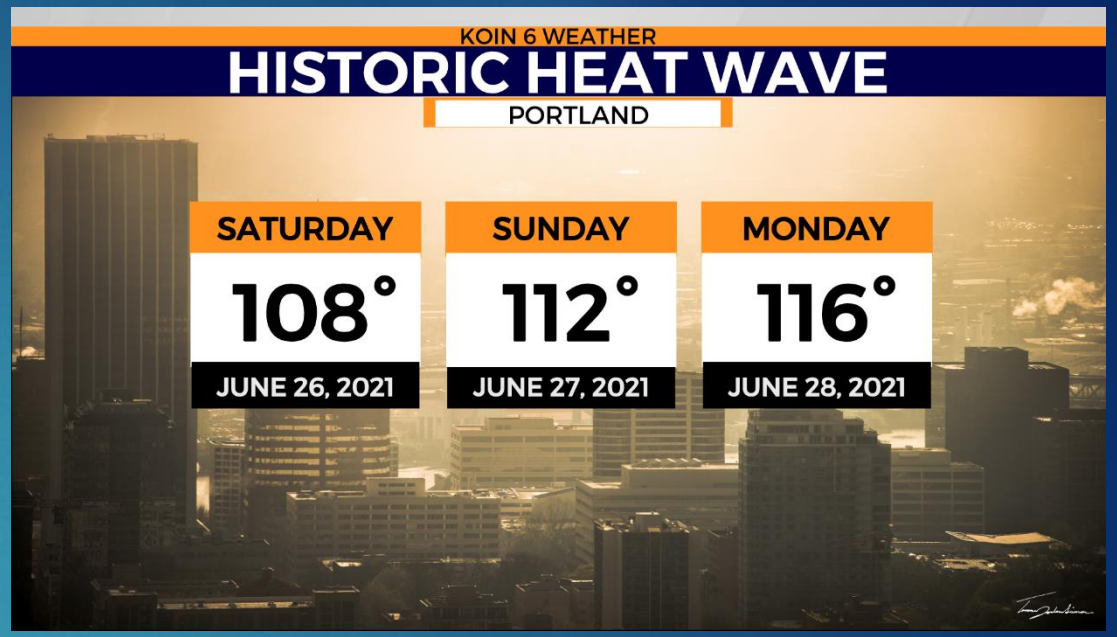
- ✓ Acquisitions, Maintenance, Fueling, and Sale for **1,400** City vehicles (not including Metro, Water Utility)
- ✓ **38** Full-Time Staff
- ✓ **9** Fuel Stations
- ✓ **4** Repair Garages
- ✓ **2** Shifts
- ✓ **4** Part-time Apprentices
- ✓ **3** Part-time Custodial Staff

NEW FLEET HQ BUILDING

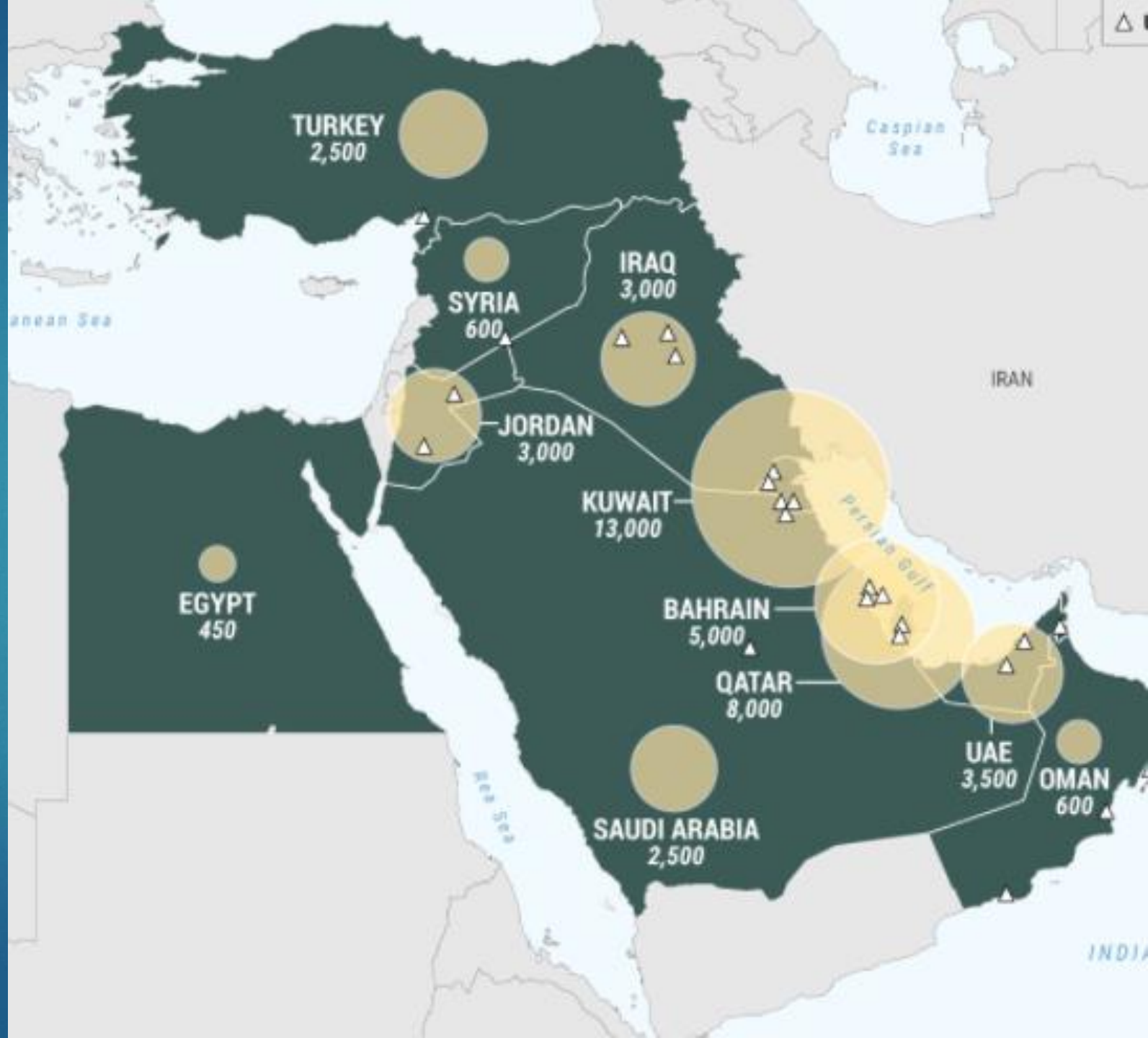
- Featuring: Solar power panels, solar water heating panels, solar heating wall for building, solar EV chargers, CNG repair bays, City EV chargers, Public EV chargers, employee EV chargers, gas/biodiesel fuel stations, natural lighting

APPRENTICES: THE NEXT GENERATION OF AUTOMOTIVE & ENGINEERING PROFESSIONALS



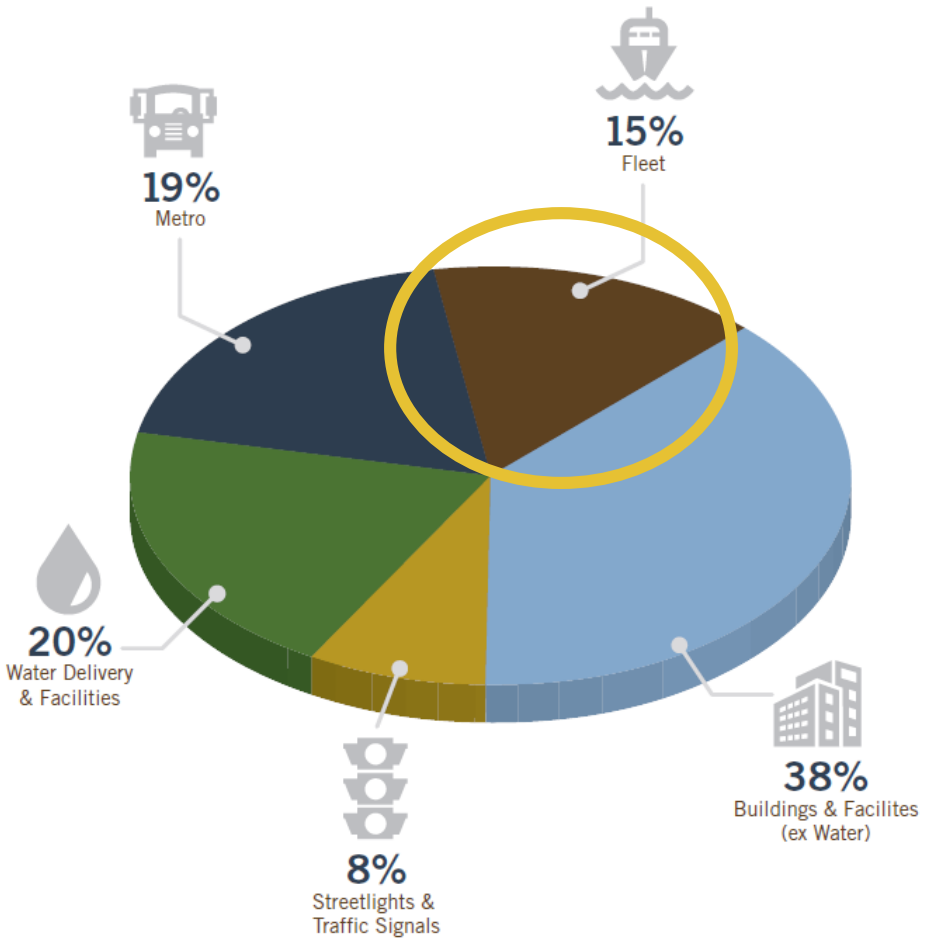

KOIN 6 WEATHER
HISTORIC HEAT WAVE
PORTLAND
SATURDAY
108°
JUNE 26, 2021
SUNDAY
112°
JUNE 27, 2021
MONDAY
116°
JUNE 28, 2021

UPSTREAM/ DOWNSTREAM EFFECTS OF FOSSIL FUELS




Climate Forward
MADISON
Investing in a clean, healthy, and more resilient future

FIGURE A-2. BASELINE CARBON EMISSIONS FOR CITY OPERATIONS BY CATEGORY*



**Excludes landfill, city employee commute, and City-owned housing emissions. Source: HGA based on ICLEI*

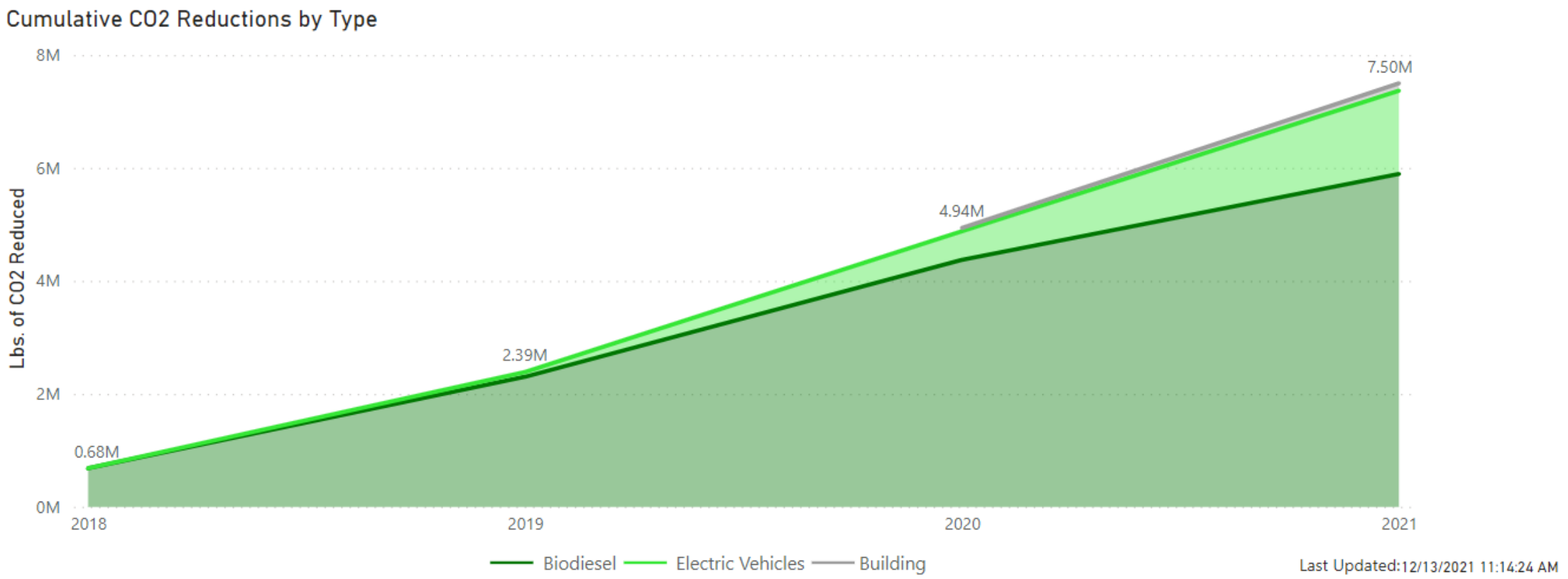
- Figure A-2 shows baseline city operations emissions were 81,141 tons CO_2 broken out by category.
- 15% of 81,141 = 12,171.15 tons CO_2

Since 2018

130.81K
LBS. OF CO2 REDUCED IN OUR MAIN FACILITY

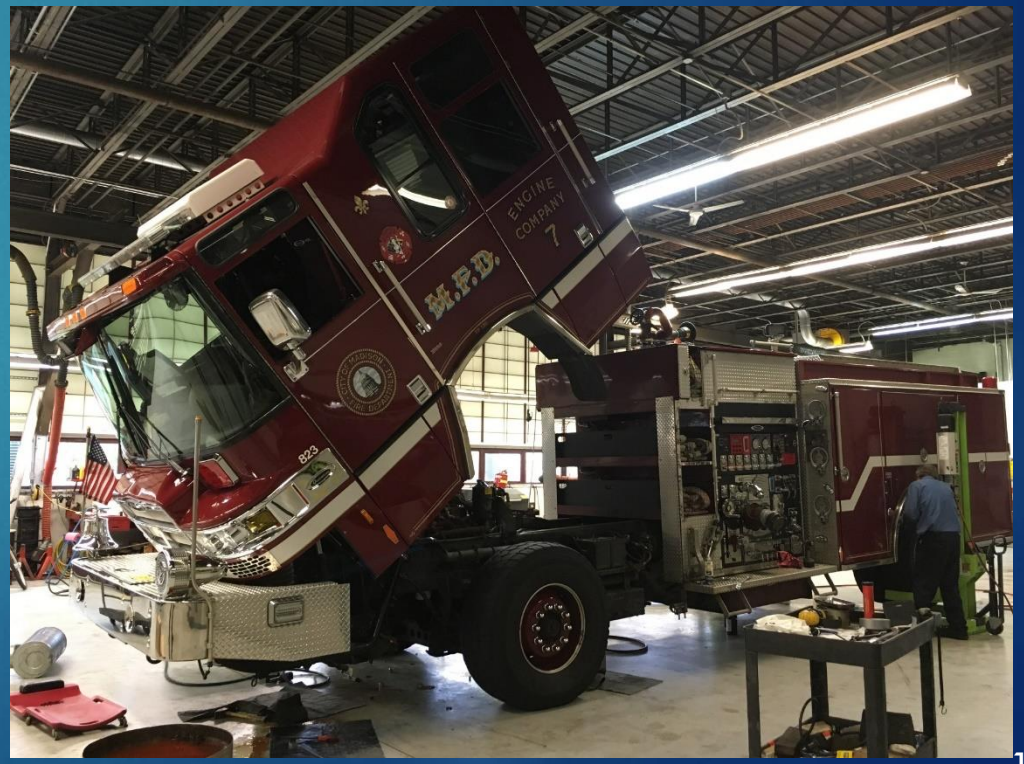
1.48M
LBS. OF CO2 REDUCED BY ELECTRIC AND HYBRID VEHICLES

5.89M
LBS. OF CO2 REDUCED BY BIODIESEL



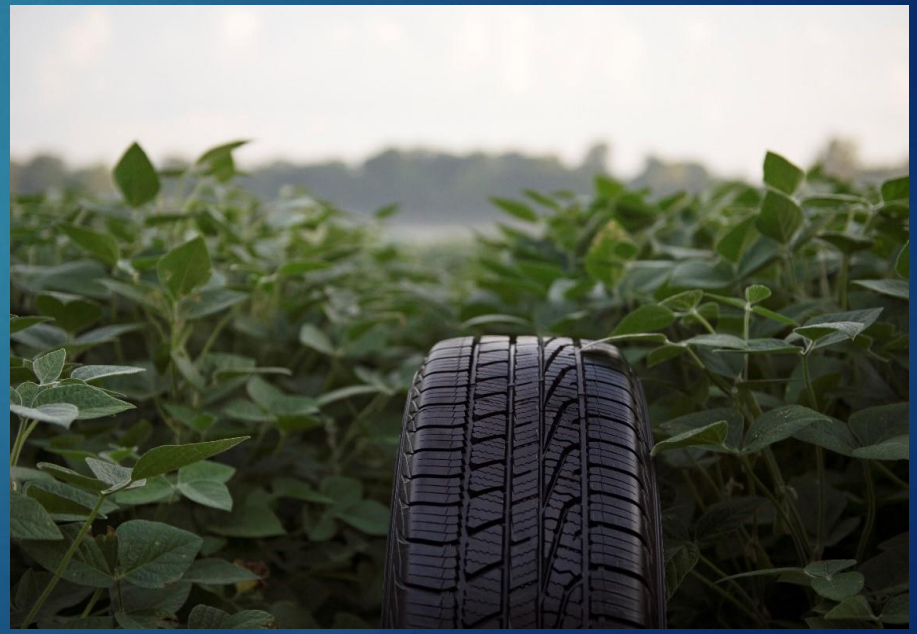
BIODIESEL

- ✓ Renewable energy source
- ✓ Largely soybean, agricultural waste and waste oil based
- ✓ Grown and processed in Midwestern states- supporting local economy including WI
- ✓ Reduces emissions and carbon footprint
- ✓ Reduces dependence on foreign oil and gas
- ✓ Blends up to 20% or B20 in warm months
- ✓ B100 pilot commences in 2022

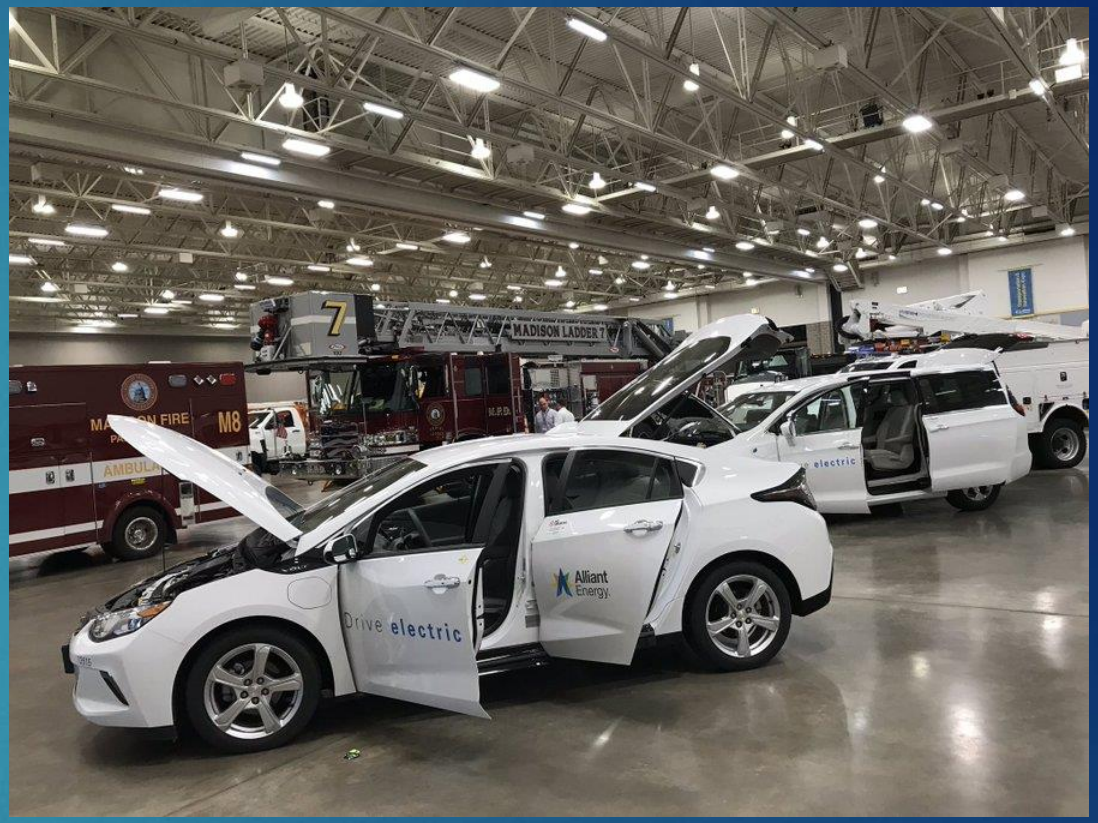


TYPES OF EVs OWNED – 60 & COUNTING

HYBRID-ELECTRIC VEHICLES & SOY TIRES



OUTREACH/PARTNERSHIP ACTIVITIES



Transportation & Innovation Expo

A sustainable transportation, infrastructure, technology and fleet vehicle conference and expo

05.23 2019 EXPO

transportation • sustainability • technology • innovation

CITY OF MADISON FLEET SERVICE

Alliant Energy

WISCONSIN CLEAN CITIES 25 ANNIVERSARY

GOVERNMENT FLEET leadingfleets

APWA AMERICAN PUBLIC WORKS ASSOCIATION

Sponsored by

Ford | FORD FLEET

Québec

2021 AND BEYOND GOALS!

- ✓ Expand Solar Capacity- Charging and Buildings
- ✓ More Electric Trucks
- ✓ Fleet Rightsizing
- ✓ Biodiesel 100 pilot
- ✓ Paperless

CONTACT

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Fleet Superintendent

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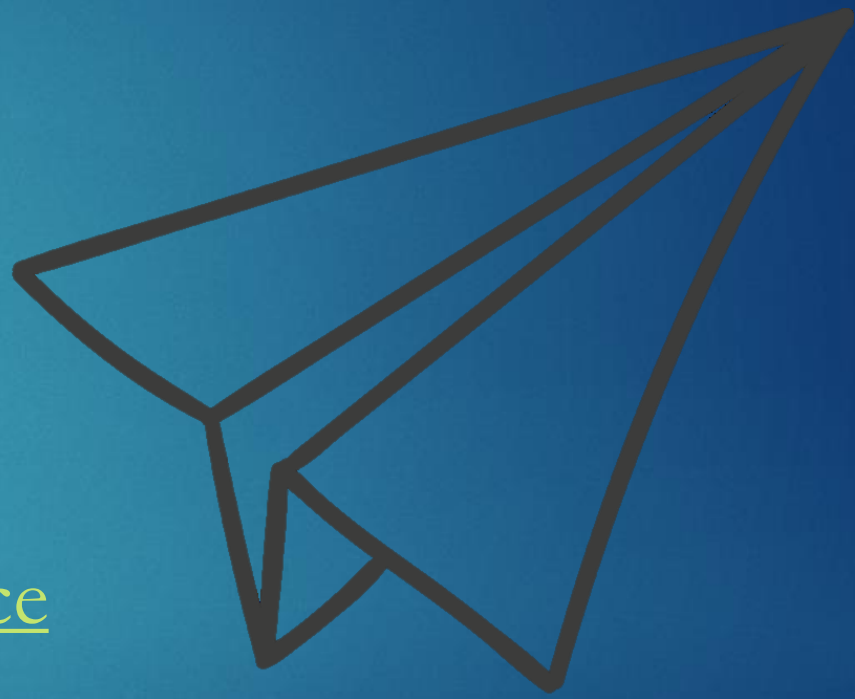
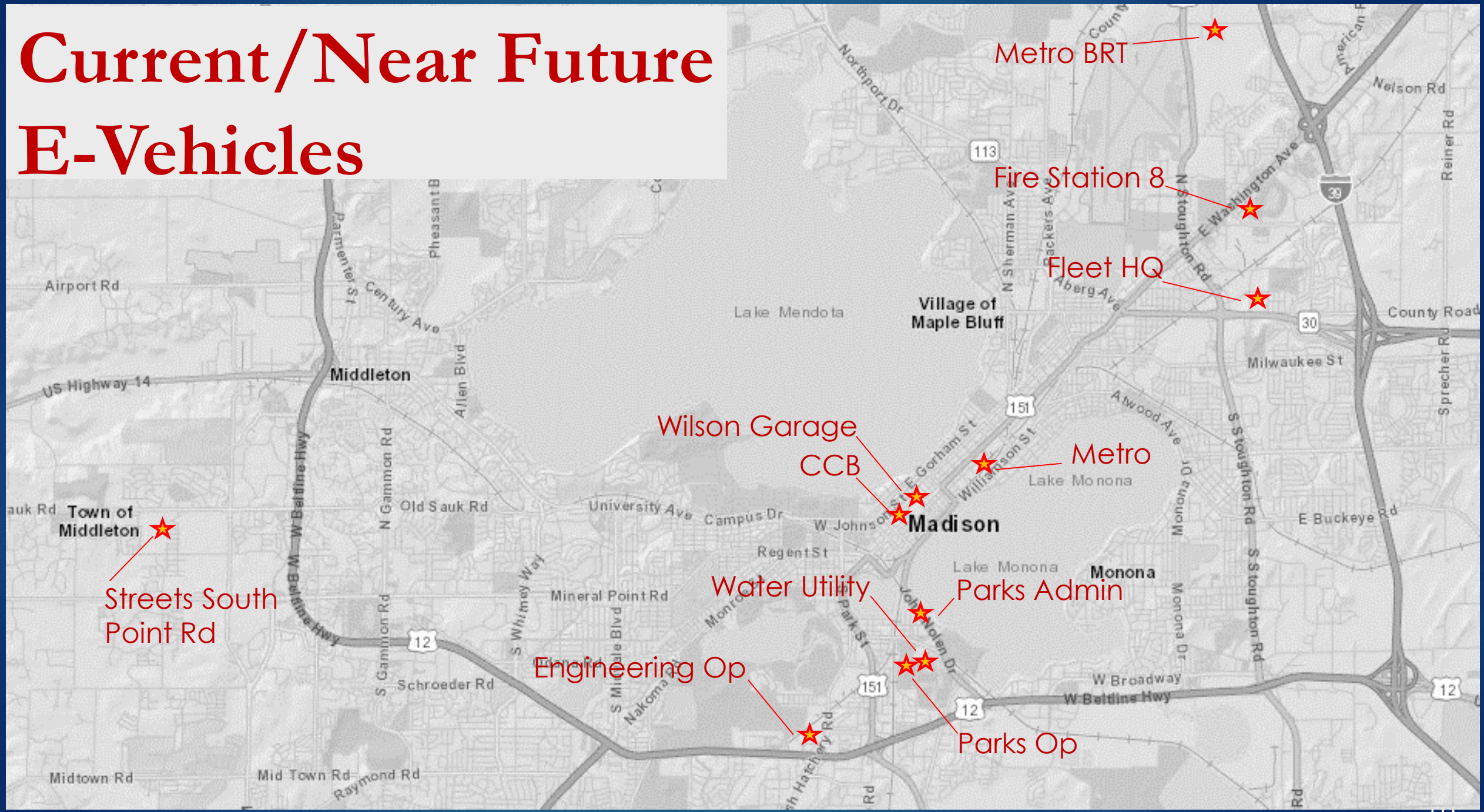


@MadisonWIFleet
@MadisonWIFleet

Current/Near Future E-Vehicles



METRO E-BUS at 1 S Ingersoll St

- ✓ (3) Proterra 40’ Buses
- ✓ (3) 125 kW Proterra Chargers
- ✓ 4000 A Electrical Service for Bus Charging
- ✓ Additional future 4000 A Electrical Service (if needed)
- ✓ Expansion for up to 60 Buses to charge in the future
- ✓ Building has 480 kW of Solar PV
- ❑ Next bus order is 2025

- ❑ 3 Proterra Buses are not yet in service due to paint/body issues and charger communication.

METRO E-BUS for BRT

- Hanson Rd Facility acquired in 2021
  - Design/Const project in process 2022-2023
- In-route and Depot charging will be used
  - In-route chargers are ~400-650 kW (quick!)
    - Overhead (pantograph)
  - Depot chargers are ~150 kW (slower, overnight)
    - Depot can be overhead or plug in.
- ~2/3 of the BRT Fleet (~24) will be Elec
- Installing a new electrical service for bus charging
- BRT service to start 2024
- Planning to install Solar PV on Roof of Facility

E-Engine at Fire Station 8

- ✓ Collaboration between City, Pierce and MGE
- ✓ 150 kW ABB Charger
- ✓ Electric Bill has Increased
  - ~30,000 kWh and $20,000 more per year
  - Cost is mostly demand and service charges – 85%
- ❑ Install of 40 kW of Solar PV in 2022.
- ❑ Fire Department in process of ordering (3) E-Engines
- ❑ Fire Department exploring E-Ambulances

MGE Rate (Cg-4): 20-200 kW vs. Cg-5 (< 20 kW)

Cg-4
20-200 kW

RATE

	Summer		Winter
Grid connection and customer service charge per day	$6.31090		$6.31090
Distribution service:			
Customer maximum 15-minute demand per kW per day	$0.08480		$0.08480
Distribution charge, per kWh	$0.01590		$0.01590
Electricity service:			
Maximum monthly on-peak 15-minute demand per kW per day	$0.42653		$0.34931
On-peak period 1 energy adder, per kWh	$0.01849		$0.01826
On-peak period 2 energy adder, per kWh	$0.02775		$0.01552
On-peak period 3 energy adder, per kWh	$0.02259		$0.01966
Base energy: All kWh, per kWh	$0.06043		$0.06043

Cg-5 **0-20 kW**	***Cost** **Impact**
All Year	
$0.78584	~$2k/yr
$0	~$3k/yr
$0.02947	lower
$0	~$15k/yr
$0	n/a
$0	n/a
$0	n/a
$0.09648	~$ same

*Assuming a 150 kW charger

Locating chargers and managing demand will be more and more critical as we continue to expand EV's to larger vehicles

CONTACT (reach out via Heidi or Rob)

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Engineer 4

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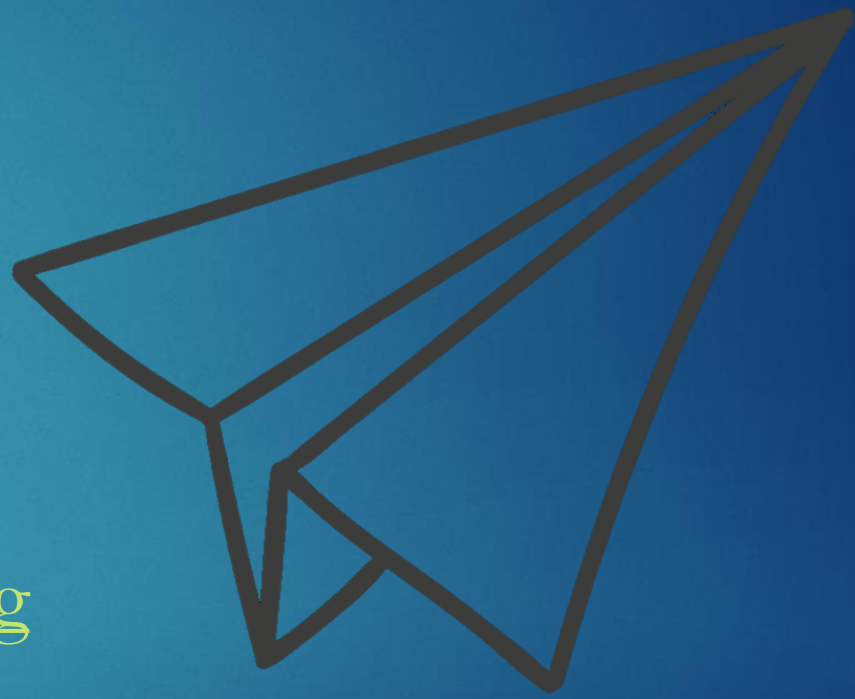

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