

PW 2021-23: 2021-2025 GREEN FLEET PLAN

Presented to: Oxford County Council

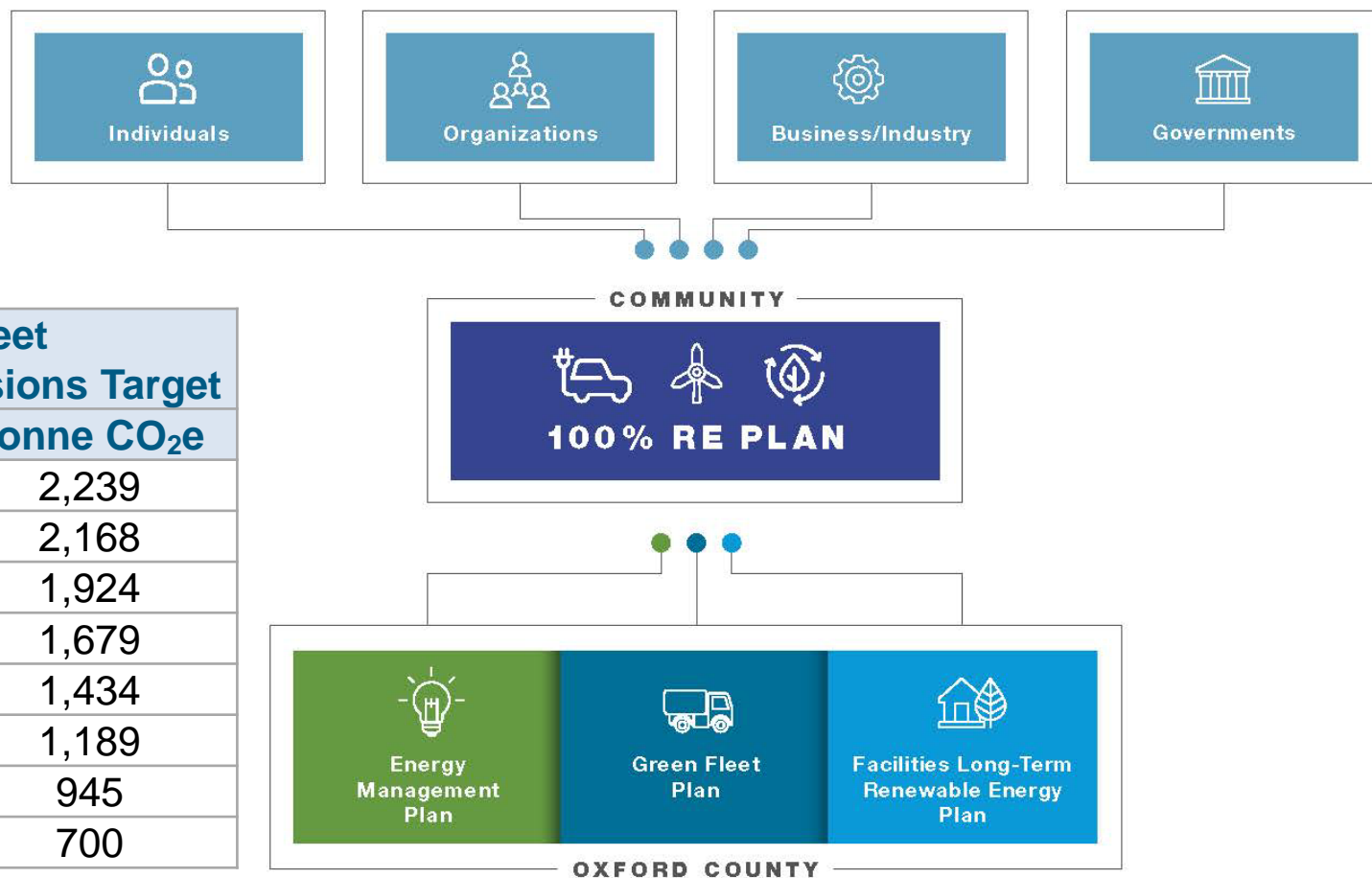
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Coordinator, Energy Management & Fleet

June 9th, 2021

OUTLINE

- Organizational Path to 100% RE
- 2016 Green Fleet Plan Achievements
- Fleet Today
- 2021-2025 Green Fleet Plan Objectives & Recommendations
- CNG Review Results
- Financial Impact – Green Fleet Plan
- Other Green Fleet Considerations
- Green Fleet Emissions Reduction to 2025

ORGANIZATIONAL PATH TO 100% RE



Year	Fleet GHG Emissions Target	
	%	Tonne CO ₂ e
2015	0.0%	2,239
2020	3.2%	2,168
2025	14.1%	1,924
2030	25.0%	1,679
2035	36.0%	1,434
2040	46.9%	1,189
2045	57.8%	945
2050	68.7%	700

2016 GREEN FLEET PLAN ACHIEVEMENTS

- 9.3% GHG emissions reduction by 2019 from 2014 levels
- 1st CNG snow plows in Canada
- 1st hybrid ambulances in Canada
- 6.7% reduction in fleet size
- Corporate Fleet Idling Policy

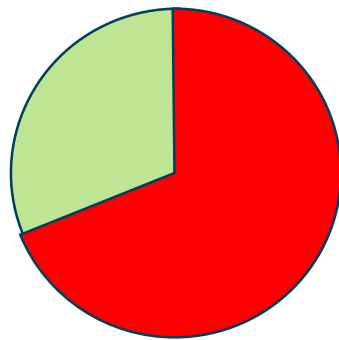


FLEET TODAY

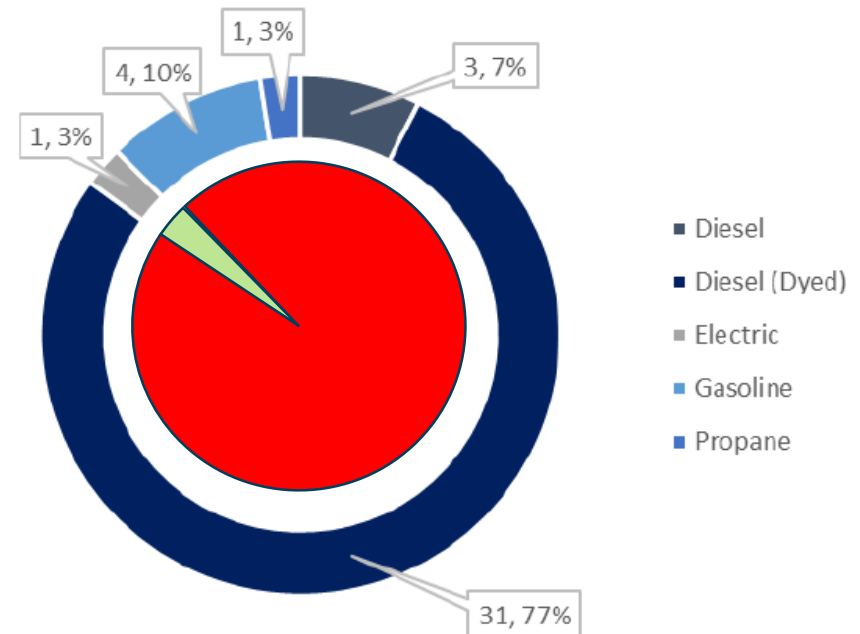
- Fleet size approx. 194 assets
- 48 fleet asset types (e.g. ambulances, ½ ton pick-up trucks)
- 12 different user groups (e.g. Waste Management)
- 6 internal fossil fueling stations, 2-Level III and 23-Level II EV charging stations



FLEET TODAY



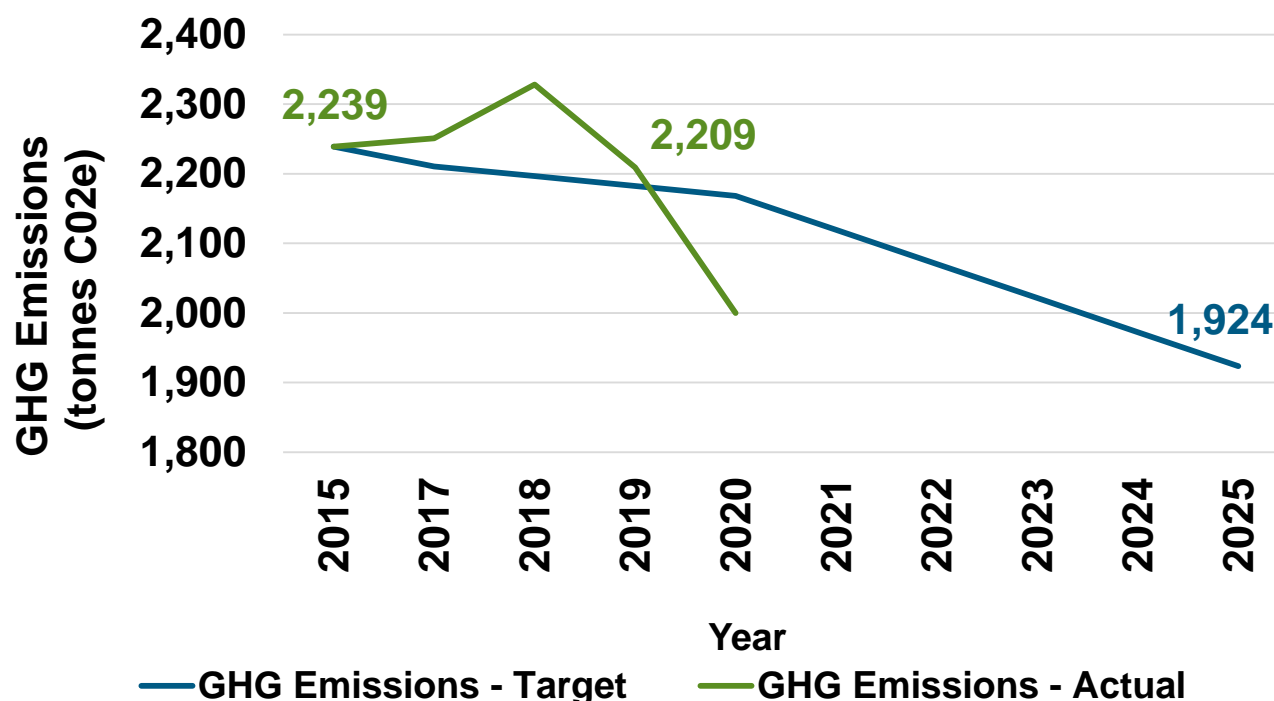
Fleet Propulsion Types - Non-Licensed



- 19% of propulsion assets use alternative fuel or 35% of licensed assets

2021-2025 GREEN FLEET PLAN OBJECTIVES

1. Identifying green fleet recommendations that would result in the County's fleet reducing GHG emissions by 14.1% (from 2015 levels) by 2025

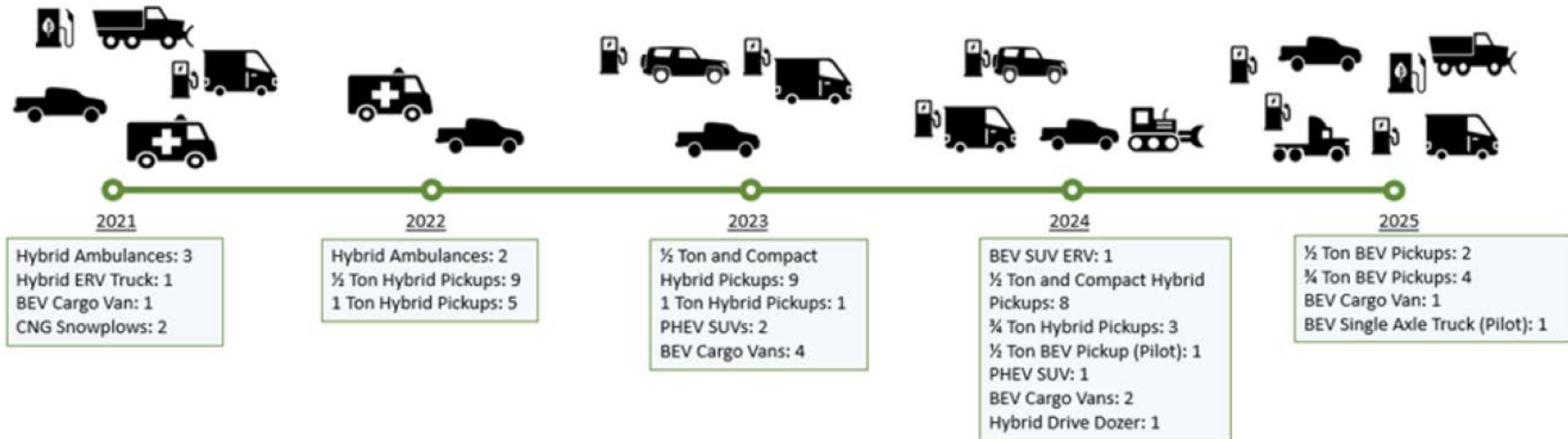


2021-2025 GREEN FLEET PLAN OBJECTIVES

2. Preparing a public document illustrating green fleet recommendations that could be implemented over a five year period (2021-2025)
3. CNG utilization review
 - Passenger vehicle CNG conversions
 - CNG snow plows
 - Proposed slow-fill CNG station at 59 George Johnson Blvd.

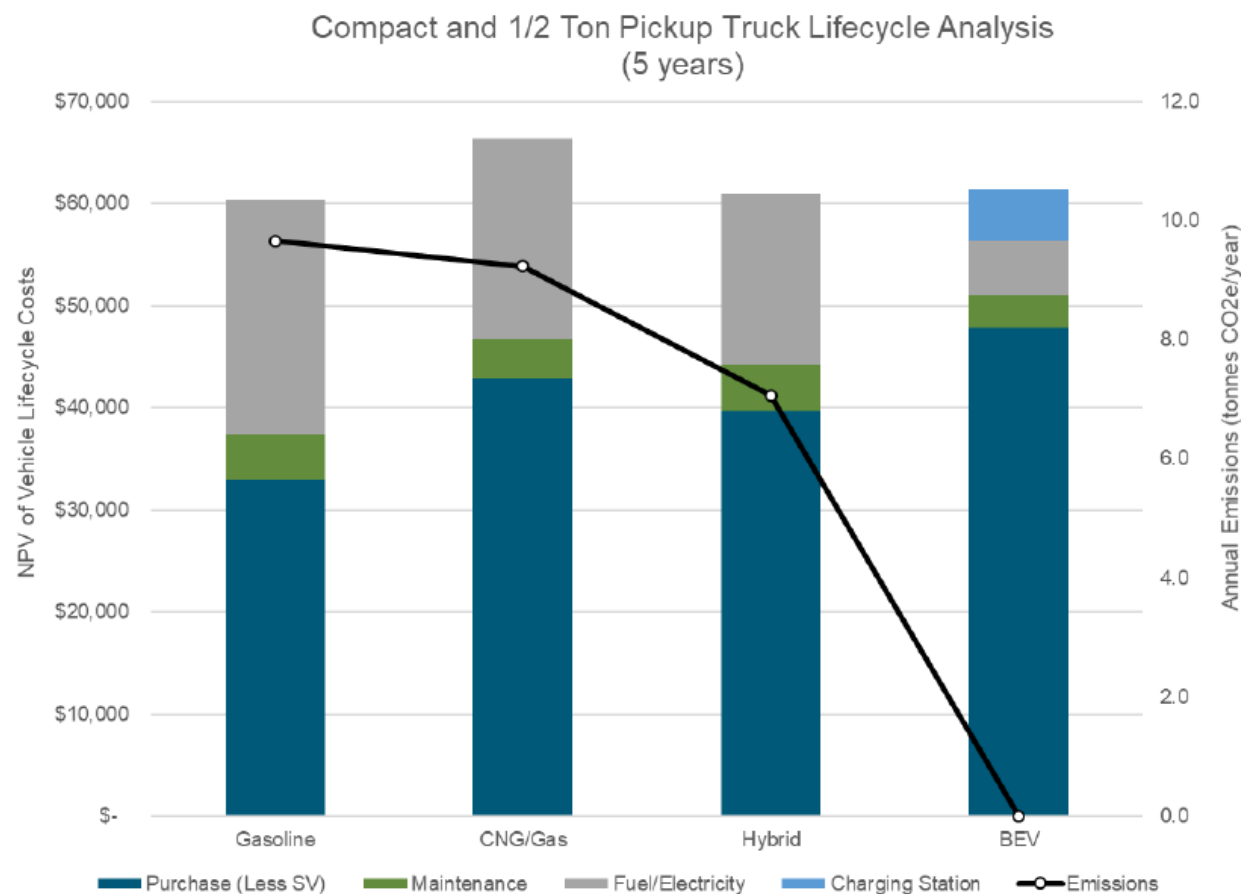
2021-2025 GREEN FLEET PLAN RECOMMENDATIONS

- 82 fleet recommendations that will result in 398 tonnes CO₂e (19% below 2015 base year levels)
- Increase from 19% to 47% alternative fueled vehicles



CNG REVIEW RESULTS

- Hybrid passenger vehicles proved to be a better option than dual fuel (i.e. gas/CNG) vehicles



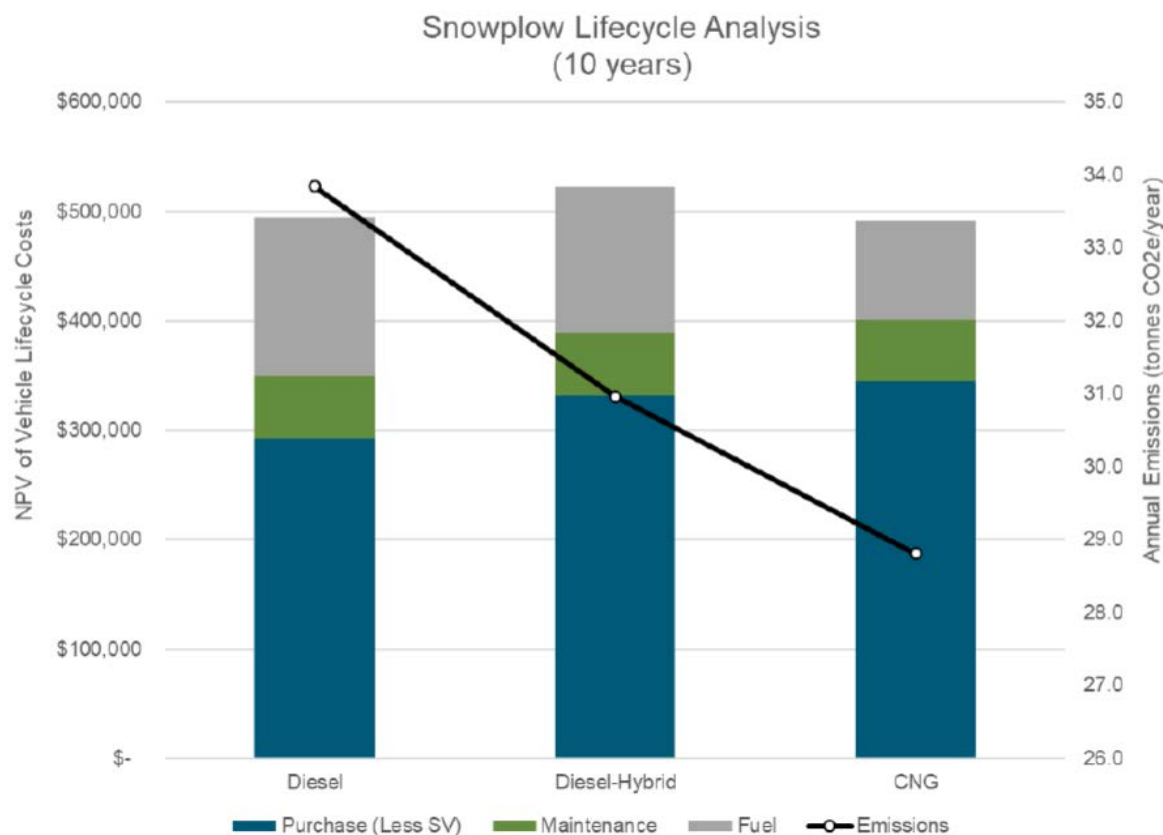
CNG REVIEW RESULTS

- 59 George Johnson Blvd., Ingersoll CNG fueling station
- 10 slow fill fueling nozzles to support light-duty vehicles
- No longer viable due to a lack of heavy-duty vehicles based near this location



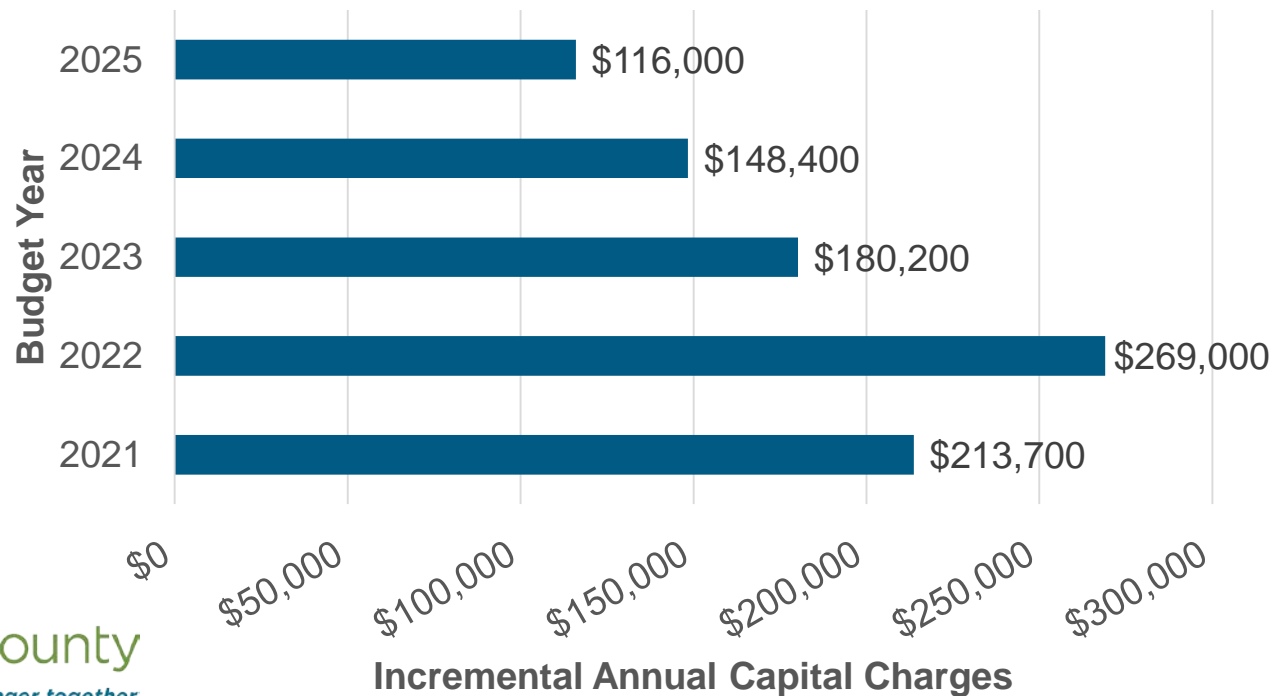
CNG REVIEW RESULTS

- CNG-powered snow plows have a slightly lower life cycle vs. diesel-powered
- Examined CNG station opportunity at Springford Patrol Yard
- Consultant determined a no payback situation
- Installation of station would limit flexibility



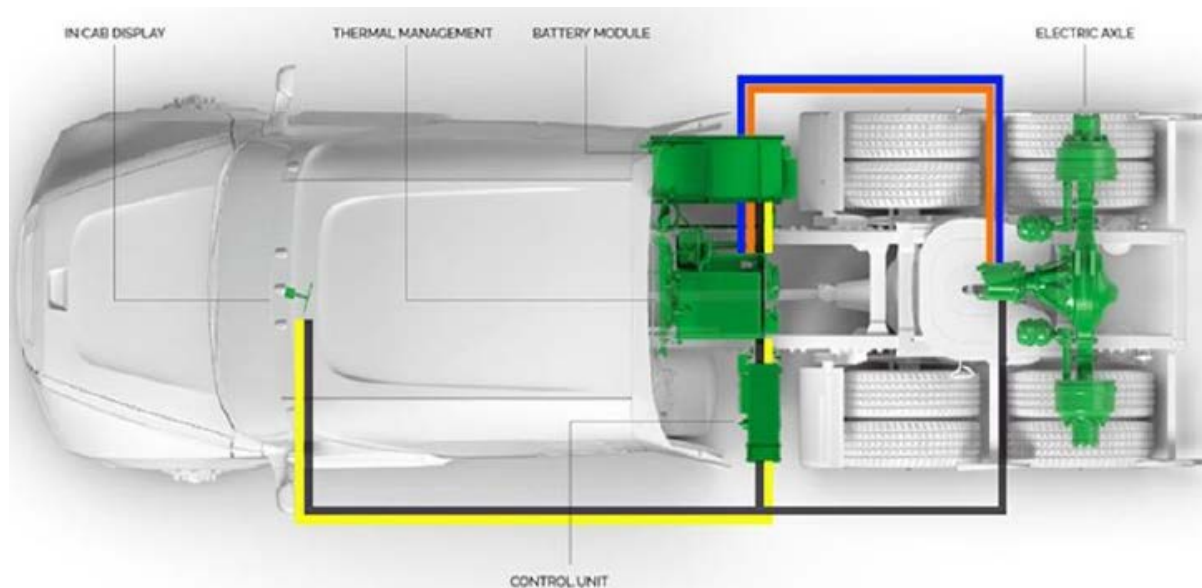
FINANCIAL IMPACT – GREEN FLEET PLAN

- 2021-2025 Green Fleet Plan will be subject to annual budget approval
- 2020 Fleet Rationalization - \$154,100 in annual capital savings
- Anticipated operational cost savings

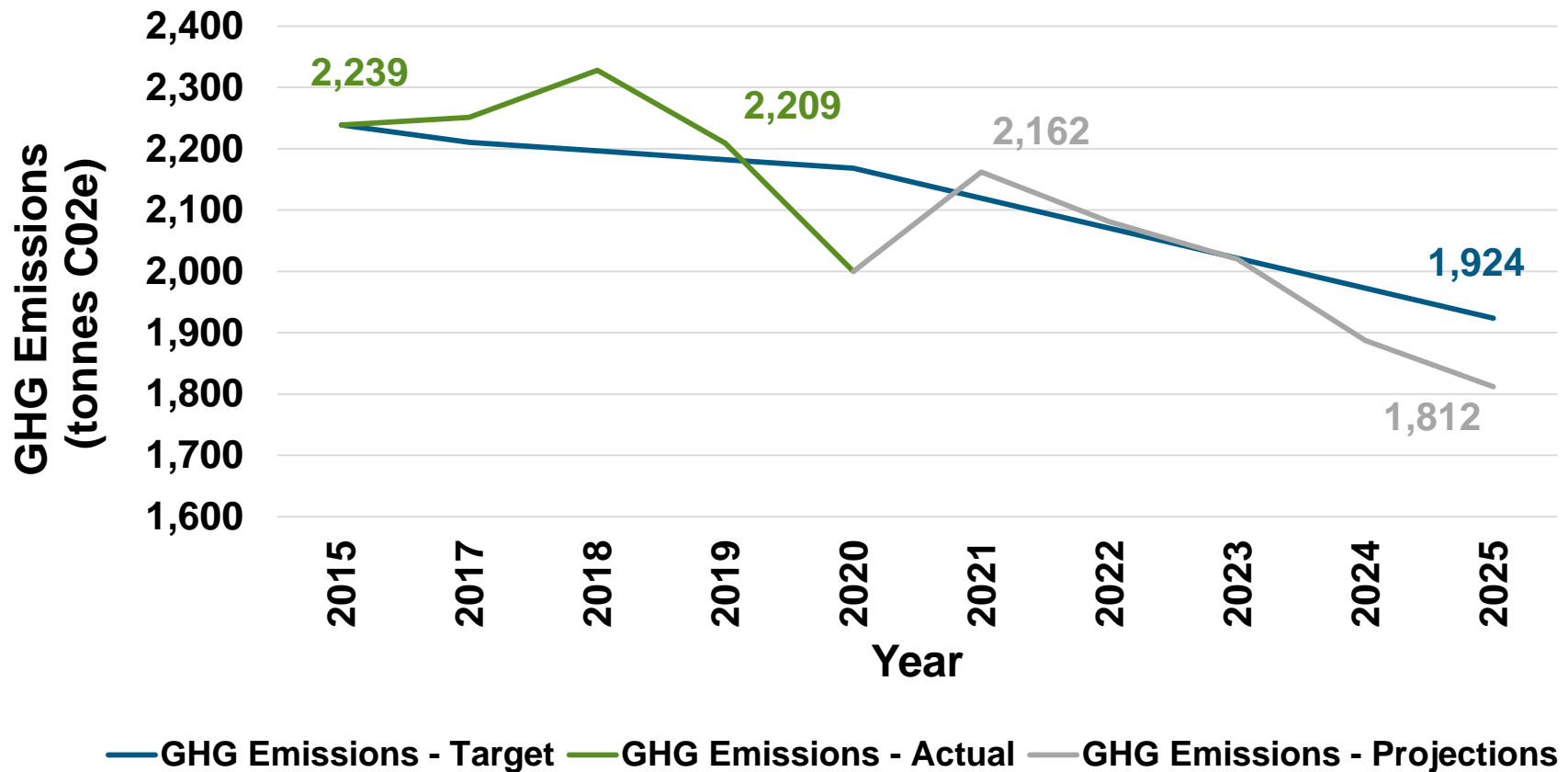


OTHER GREEN FLEET CONSIDERATIONS

- Hydrogen Fuel Cell Electric Vehicles
- Renewable Natural Gas (RNG)
- Renewable Diesel
- Hybrid Drive Axle



GREEN FLEET EMISSIONS REDUCTION TO 2025



Questions?

Thank You