

2025 FLEET MANAGEMENT PLAN

PRESENTATION TO GCTD BOARD OF DIRECTORS

February 5, 2025



Fleet Management Plan



Gold Coast Transit District (GCTD) currently maintains and operates a fleet of 116 vehicles comprised of buses, demand response vehicles and non-revenue vehicles.

This Fleet Management Plan details the current and future needs of GCTD's fleet, highlighting important issues and opportunities for the efficient management and growth of these assets over the next ten years. The plan will be updated regularly to assist with the preparation of the annual budget, the Ten-Year Capital Improvement Program, and the Transit Asset Management Plan. It will act as a strategic guide to inform decisions regarding fleet acquisition, maintenance, and replacement.



Fleet Replacement Needs

- Non-revenue Fleet
- Demand Response Fleet
- Fixed-Route Fleet

Zero Emission - Innovative Clean Transit Rule (ICT)

- Hydrogen "FCEB's"
- Funding Needs

Fleet Management Plan



- 2019** -CARB Adopted Innovative Clean Transit (ICT) rule requiring agencies set a goal of zero emissions fleets by 2040
- 2022** -GCTD developed a zero-emissions bus plan (ZEB plan) choosing Hydrogen fuel cell electric buses (FCEBs) as the primary option for the fleet transition because of its excellent range and quick refueling.
- 2023** -GCTD purchased 4 near zero CNG Gillig 40' buses
 - 2 BraunAbility Vans for Demand Response
 - 2 relief/supervisor BEV's (Battery Electric vehicles)
- 2024** -As part of a Low-No grant received in 2022, GCTD ordered 5 New Flyer FCEB's (**Hydrogen Fuel cell electric buses**)
 - Awarded Clean Energy to build our Hydrogen Fuel station
 - Purchased 5 near zero CNG Gillig 40' buses,
 - Purchased 2 BraunAbility Vans for Demand Response
 - Purchased 2 Hyundai Ionic Electric cars for Demand Response
 - Purchased 2 Battery Electric supervisor vehicles
 - GCTD transitioned the operations and maintenance of the Demand Response Services from contractor to in house

Non-Revenue Fleet



- Battery Electric Nissan Leaf
- Reduction in CO2 and noise pollution.
- 14 charging stations active
- 14 additional charging stations will be added in 2025



GCTD's non-revenue vehicles are categorized into three essential groups:

1. Supervision vehicles
2. Driver relief vehicles
3. Maintenance repair vehicles

These vehicles play crucial roles in maintaining efficient transit operations and responding to unexpected situations.

Vehicles are equipped with necessary communication systems to coordinate with dispatch & drivers.

Vehicles contain safety equipment and basic tools for emergency response

By utilizing these specialized vehicles, GCTD can maintain service reliability, respond quickly to incidents, and ensure the smooth operation of its transit system.

Non-Revenue Fleet



Non-Revenue Acquisition Forecast

Year	Make	Model Type	Relief Supervisor	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Fuel Type				ZERO	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO
# of Replacement Vehicles				2	3	3	5	4	0	3	0	2	0
Expansion Vehicles by Year				0	0	0	0	0	0	0	1	0	0
2007	Chevrolet	Van	Admin	1									
2009	Honda	Sedans	Relief	1									
2010	El Dorado	Van	Supervisor	1	1								
2012	Honda	Sedans	Relief	2	2								
2013	El Dorado	Van	Supervisor	1	1	1							
2015	Honda	Sedans	Relief	2	2	2							
2019	Nissan (BEV)	Sedan	Relief	5	5	5	5						
2020	Nissan (BEV)	Sedan	Supervisor	3	3	3	3	3					
2023	Nissan (BEV)	Sedan	Relief	2	2	2	2	2	2	2			
2024	Nissan (BEV)	Sedan	Supervisor	1	1	1	1	1	1	1	1	1	
2024	Hyundai (BEV)	Sedan	Supervisor	1	1	1	1	1	1	1	1	1	
TBD	Replace	Van	Admin	1	1	1	1	1	1	1	1	1	1
TBD	Replace	Sedan	Relief	1	1	1	1	1	1	1	1	1	1
TBD	Replace	Van	Supervisor	→	1	1	1	1	1	1	1	1	1
TBD	Replace	Sedan	Relief	→	2	2	2	2	2	2	2	2	2
TBD	Replace	Van	Supervisor	→	→	1	1	1	1	1	1	1	1
TBD	Replace	Sedan	Supervisor	→	→	2	2	2	2	2	2	2	2
TBD	Replace	Sedan	Admin	→	→	→	5	5	5	5	5	5	5
TBD	Replace	Sedan	Relief	→	→	→	→	3	3	3	3	3	3
TBD	Replace	Sedan	Relief	→	→	→	→	→	2	2	2	2	2
TBD	Replace	Sedan	Supervisor	→	→	→	→	→	→	→	→	1	1
TBD	Replace	Sedan	Supervisor	→	→	→	→	→	→	→	→	1	1
Non Revenue Fleet Size				20	20	20	20	20	20	20	20	20	20

REPLACEMENT NEEDED
 PLAN TO ACQUIRE ZERO EMISSION VEHICLES

GCTD plans to replace:

- 2025 – 2 vehicles
- 2026 – 3 vehicles
- 2027 – 3 vehicles
- 2028 – 5 vehicles

GCTD now has 12 Battery Electric Vehicles that will drastically reduce the carbon footprint for the non-revenue fleet.

All non-revenue vehicle purchases since 2019 have been Zero-emission BEV's



Demand Response Fleet

GCTD utilizes five (5) vehicle types for its Demand Response service:



Quantity	Model	Manufacturer	First Year Of Service	Last Year Of Service	FTA Minimum Useful Life	GCTD TAM Useful Life	FTA Funded
2	Van	MV-1	2015	2023	4	8	No
7	Van	MV-1	2016	2024	4	8	No
8	Cut-Away	Star Craft	2017	2025	4	8	No
5	Van	Ford	2019	2027	4	8	No
1	Van	Ford	2021	2026	4	5	No
2	Van	BraunAbility	2023	2028	4	5	No
1	Van	BraunAbility	2024	2029	4	5	No
2	Van	Hyundai	2024	2029	4	5	No
1	Van	BraunAbility	2025	2030	4	5	Yes

The MV-1's, Ford E450 cutaway's, Ford Transit's, BraunAbility vans and Hyundai Ionics's were purchased with State and Federal funds. The current mix of cutaways, transits and smaller passenger vans will be adjusted to reflect recorded ridership trends based on destination requests for the type of service being requested.

Fleet Acquisition Forecast

Make	Useful Life	Passenger	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Fuel Type			GAS CNG	GAS CNG	GAS CNG	GAS CNG	GAS CNG	GAS CNG	GAS CNG	GAS CNG	GAS CNG	GAS CNG
			ZERO	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO
# of Replacement Vehicles			6	4	8	6	4	2	3	3	2	2
Expansion Vehicles by Year			0	1	0	0	2	0	0	0	2	0
2014 MV-1	8-yrs	3 + 1WC	2									
2015 MV-1	8-yrs	3 + 1WC	7									
2017 Ford Cutaway	8-yrs	14+3WC	8	8	8							
2019 Ford Transit	5-yrs	5+1WC	5	5	5	5						
2021 Ford E-Transit (BEV)	5-yrs	5+1WC	1	1	1	1						
2023 BraunAbility Van	5-yrs	5+1WC	2	2	2	2	2					
2024 Hyundai Ionic (BEV)	5-yrs	3 (No WC)	2	2	2	2	2					
2024 BraunAbility Van	5-yrs	5+1WC	2	2	2	2	2	2				
2025 Ford Transit	5-yrs	5+1WC	3	3	3	3	3	3	3			
2025 Ford Transit	5-yrs	5+1WC	3	3	3	3	3	3	3	3		
TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Replace	5-yrs	5+1WC	6	6	6	6	6	6	6	6	6	6
Expand	5-yrs	TBD	→	1	1	1	1	1	1	1	1	1
Replace	5-yrs	TBD	→	3	3	3	3	3	3	3	3	3
Replace	5-yrs	TBD	→	→	8	8	8	8	8	8	8	8
Replace	5-yrs	TBD	→	→	→	6	6	6	6	6	6	6
Expand	5-yrs	TBD	→	→	→	→	2	2	2	2	2	2
Replace	5-yrs	TBD	→	→	→	→	4	4	4	4	4	4
Replace	5-yrs	TBD	→	→	→	→	→	→	2	2	2	2
Replace	5-yrs	TBD	→	→	→	→	→	→	→	3	3	3
Expand	5-yrs	TBD	→	→	→	→	→	→	→	→	2	2
Demand Response Fleet Size			29	30	30	30	32	32	32	32	34	34

IDENTIFY FUNDING & PROCUREMENT ACTION (2-3 YRS NEEDED)

REPLACEMENT NEEDED

REPLACEMENT NEEDED / FUNDING IDENTIFIED

PLAN TO ACQUIRE ZERO EMISSION BUSES** If Grant Awarded

PLAN TO ACQUIRE CNG (Near Zero Engine) BUSES

In 2025, 17 vehicles will have reached or surpassed the ULB useful life benchmark.

GCTD plans to replace:

- 6 Vehicles in 2025
- 4 Vehicles in 2026
- 8 Vehicles in 2027
- 6 Vehicles in 2028
- 4 Vehicles in 2029

Fixed Route Fleet



Current Fleet

Quantity	Size	Manufacturer	First Year Of Service	Last Year Of Service	FTA Minimum Useful Life Years	GCTD TAM Useful Life Years	FTA Funded
9	35-ft	NABI	2008	2026	12	12	Yes
8	35-ft	NABI	2009	2026	12	12	Yes
5	40-ft	New Flyer	2006	2025	12	17*	Yes
8	40-ft	Gillig	2015	2027	12	12	Yes
5	40-ft	Gillig	2016	2028	12	12	Yes
5	40-ft	Gillig	2019	2030	12	12	Yes
3	40-ft	Gillig	2021	2032	12	12	Yes
9	40-ft	Gillig	2022	2033	12	12	Yes
4	40-ft	Gillig	2023	2034	12	12	Yes
5	40-ft	Gillig	2024	2035	12	12	Yes
61 Total							

GCTD's current fixed-route fleet of 61 compressed natural gas (CNG) buses, and 3-40' CNG buses used as contingency buses.

GCTD must comply with FTA regulations in its maintenance and replacement plans. FTA specifies that the minimum useful life of a heavy-duty transit bus is 12 years or 500,000 miles. GCTD follows these guidelines and expects a ULB of 12 years or 500,000 miles for transit buses.



Performance and efficiency matches the current ISL G engine

Improves air quality and lowers noise pollution

Fixed Route Fleet



Fleet Acquisition Forecast

Make	Useful Life	Size	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
			CNG ZERO	CNG	CNG	CNG	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO
Fuel Type			CNG ZERO	CNG	CNG	CNG	ZERO	ZERO	ZERO	ZERO	ZERO	ZERO
# of Replacement Vehicles			14	8	0	4	4	5	5	3	3	9
Expansion Vehicles by Year			0	0	0	0	0	0	0	3	0	0
New Flyer NZ 2006 (5)	17-yr*	40'	5									
NABI 2008 (9)	12-yr	35'	9		Tank							
NABI 2009 (8)	12-yr	35'	8	8		Tank						
Gillig 2015 (8)	12-yr	40'	8	8	8							
Gillig 2016 (5)	12-yr	40'	5	5	5	5						
Gillig 2019 (5)	12-yr	40'	5	5	5	5	5	5				
Gillig 2021 (3)	12-yr	40'	3	3	3	3	3	3	3	3		
Gillig 2022 (9)	12-yr	40'	9	9	9	9	9	9	9	9	9	
Gillig 2023 (4)	12-yr	40'	4	4	4	4	4	4	4	4	4	4
Gillig 2024 (5)	12-yr	40'	5	5	5	5	5	5	5	5	5	5
Gillig 2025 (9)	12-yr	40'	9	9	9	9	9	9	9	9	9	9
New Flyer 2025 (5)	12-yr	40'	5	5	5	5	5	5	5	5	5	5
Gillig 2026 (8)	12-yr	40'	8	8	8	8	8	8	8	8	8	8
Gillig 2027 (8)	12-yr	40'	8	8	8	8	8	8	8	8	8	8
Gillig 2028 (5)	12-yr	40'	5	5	5	5	5	5	5	5	5	5
Replacement CNG Gillig (9)	12-yr	40'	9	9	9	9	9	9	9	9	9	9
Replacement FCEB NF (5)	12-yr	40'	5	5	5	5	5	5	5	5	5	5
Replacement CNG (8)	12-yr	40'	→	8	8	8	8	8	8	8	8	8
Replacement CNG (8)	12-yr	40'	→	→	8	8	8	8	8	8	8	8
Replacement CNG (5)	12-yr	40'	→	→	→	5	5	5	5	5	5	5
Replacement ZERO (5)	12-yr	TBD	→	→	→	→	→	5	5	5	5	5
Expansion ZERO (3)	12-yr	TBD	→	→	→	→	→	→	→	3	3	3
Replacement ZERO (3)	12-yr	TBD	→	→	→	→	→	→	→	3	3	3
Replacement ZERO (9)	12-yr	TBD	→	→	→	→	→	→	→	→	9	9
Replacement ZERO (4)	12-yr	TBD	→	→	→	→	→	→	→	→	→	4
Fixed Route Fleet Size			61	61	61	61	61	61	61	64	64	64
Contingency Fleet			3	3	3	3	3	3	3	3	3	3

IDENTIFY FUNDING & PROCUREMENT ACTION (2-3 YRS NEEDED)
REPLACEMENT NEEDED
REPLACEMENT NEEDED / FUNDING IDENTIFIED
PLAN TO ACQUIRE ZERO EMISSION BUSES** If Grant Awarded
PLAN TO ACQUIRE CNG (Near Zero Engine) BUSES

In the next 5 years 35 buses will have reached or surpassed the ULB (Useful Life Benchmark).

GCTD plans to replace these buses with:

- 5 Zero Emission FCEB's & 9 CNG Buses 2025
- 8 CNG Buses 2026
- 8 CNG Buses 2027
- 5 CNG Buses 2028

Funding



The estimated total cost to replace 35 buses is \$31 million

Years	2025	2025	2026	2027	2028
Estimated Cost to replace 35 buses over the next 5 years	\$ 1,300.00	\$ 762.00	\$ 800.00	\$ 840.00	\$ 880.00
Number of Buses Replaced	5 ZERO	9 CNG	8 CNG	8 CNG	5 CNG
Funding need for the next 5 years (2025-2030)	\$ 6,500.00	\$ 6,858.00	\$ 6,400.00	\$ 6,720.00	\$ 4,410.00
				\$	30,888.00

Potential Funding Sources:

- Federal Competitive Grants CMAQ/5339/Low-No
- State Competitive Grants (TIRCP, LCTOP and more)
- Innovative Partnership with other agencies or businesses
- Local Revenue Measure for Zero Emissions

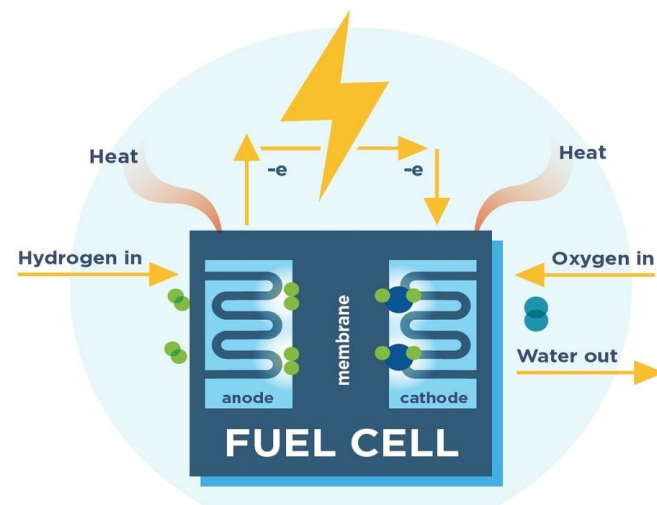
Planning Grants

- STEP Grant / CARB Grants (for Zero Emissions Planning)

Challenge: We do not have a source of Local Matching funds, which puts us at a disadvantage when competing for these grants.

CARB: Innovative Clean Transit Regulation

- The mandated Innovative Clean Transit (ICT) regulation states starting in 2026, 25% of all buses purchased by GCTD must be zero-emission.
- All purchases after 2029 must be 100% zero-emissions for small transit agencies (Fewer than 100 buses).
- The goal set by the ICT regulation would be for all transit agencies to transition entire fleets to zero-emissions by 2040.
- With all transit agencies in California affected by the ICT regulation, funding opportunities are sure to dry up the closer to the above deadlines.



Advantages of Fuel Cell Electric Buses

- Zero tailpipe emissions
- Consistent power delivery
- Range of up to 350 miles
- Can be refueled in less than 10 mins



Ballard Fuel Cell module



Application
Medium – heavy duty applications

Net Power
100kW

Voltage
280 – 560 V

Dimensions(mm)
1081 x 693 x 650

Weight
256 kg

IP rating
IP6K9K

Stack
FCgen®-LCS

Freeze start
-25°C

Cooling Method
Liquid Cooled

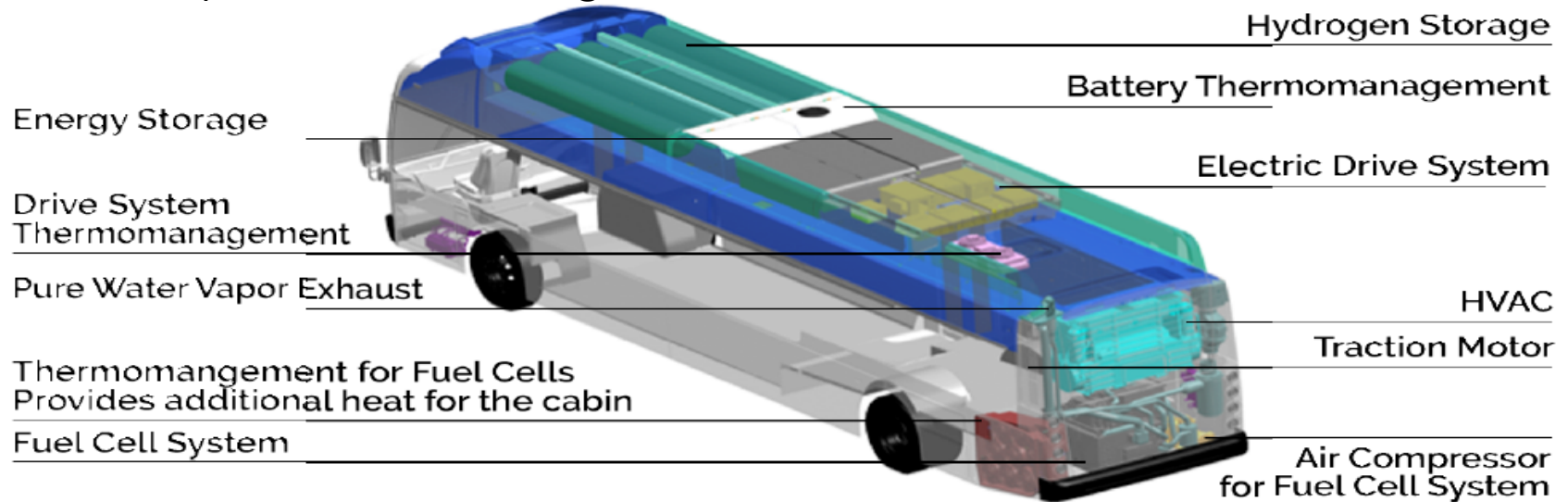
Hydrogen Fuel Cell Bus



How it works.

A fuel cell is a device that converts chemical energy into electric energy. A series of chemical reactions splits hydrogen into protons and a current of electrons and then combines them with oxygen, which produces water and heat. The flow of electrons is the electric current. The electric current is used to power the batteries and ultimately power the bus.

Fuel cells produce electricity without combustion, which means that, unlike internal combustion engines, they generate little (if any) noise, vibration, air pollution, or greenhouse gasses and operate at high efficiency over a wide range of loads.



Members of ZEBRA and ARCHES program for Zero Emission Resources



ZEBRA currently represents the collective voice of 77 transit agencies nationwide. Varying in fleet size and zero-emission experience, our members are early-adopters of transportation technologies leading the way to a zero-emission future.

ARCHES is a statewide public-private partnership built on California's long-standing H₂ and renewable energy leadership to serve as the applicant and organizer for a statewide H₂ hub



Questions?

We ask that the Board of Directors consider approval of the annual update to the fleet management plan.

