

UBC – FACILITIES FLEET PRESENTATION

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FLEET AND ASSET MANAGEMENT

Fleet management to facilities group and support to other departments.

- Fleet services for Facilities - procuring, infrastructure, telematics, fuel stations/system management, driver training, car-share
- Vehicle and equipment maintenance, outfitting and decommissioning to the campus community.



FLEET STRATEGY OVERVIEW

Scalable and Adaptable

- Technology and industry changes
- Expandable to other groups

Accountability

- Shared vehicles
- Charge-out rates
- Roles/responsibilities
- Telematics
- Licensing
- Driver training
- Vendor relationships

Asset Management

- Life-cycle analysis and replacement options
- Tracking
- Preventative maintenance

Infrastructure and Resiliency

- Fueling
- Parking and access
- Garage needs



OVERVIEW

- Facilities' vehicles
- Climate Action Plan 2030
- Facilities' Fleet Policy
- Shared Vehicle Program
- Standardization/Infrastructure
- Telematics
- Questions

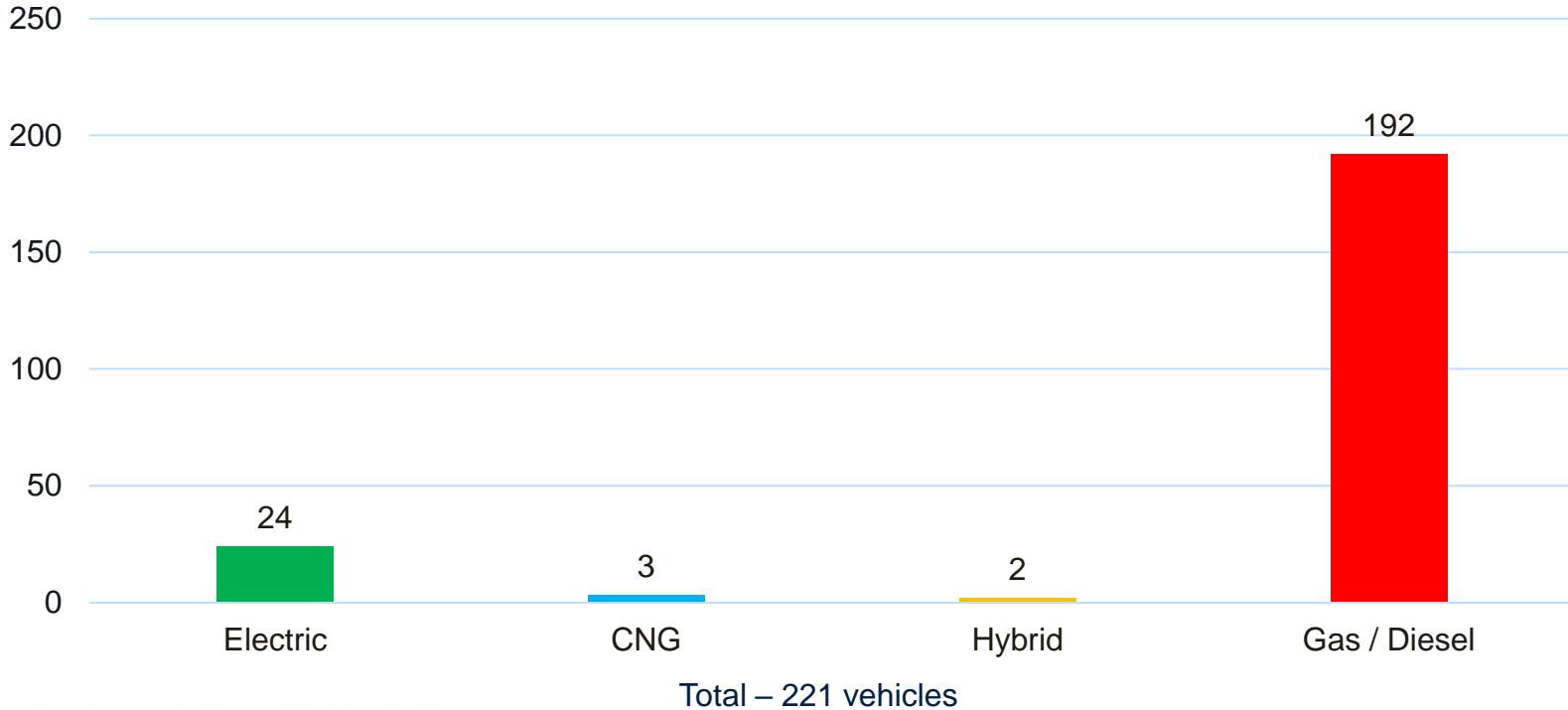


UBC FLEET OVERVIEW

- Total Vehicle's / Equipment's at UBC Vancouver and Okanagan Campus ~ 595
- UBC Okanagan Campus ~ 77
- UBC Vancouver Campus ~ 518
 - a) UBC Facilities ~ 221 – largest number of vehicles by department
 - b) Faculty of Forestry ~ 41
 - c) Student Housing ~ 40
 - d) Athletics and Recreation ~ 21
 - e) Other departments ~195



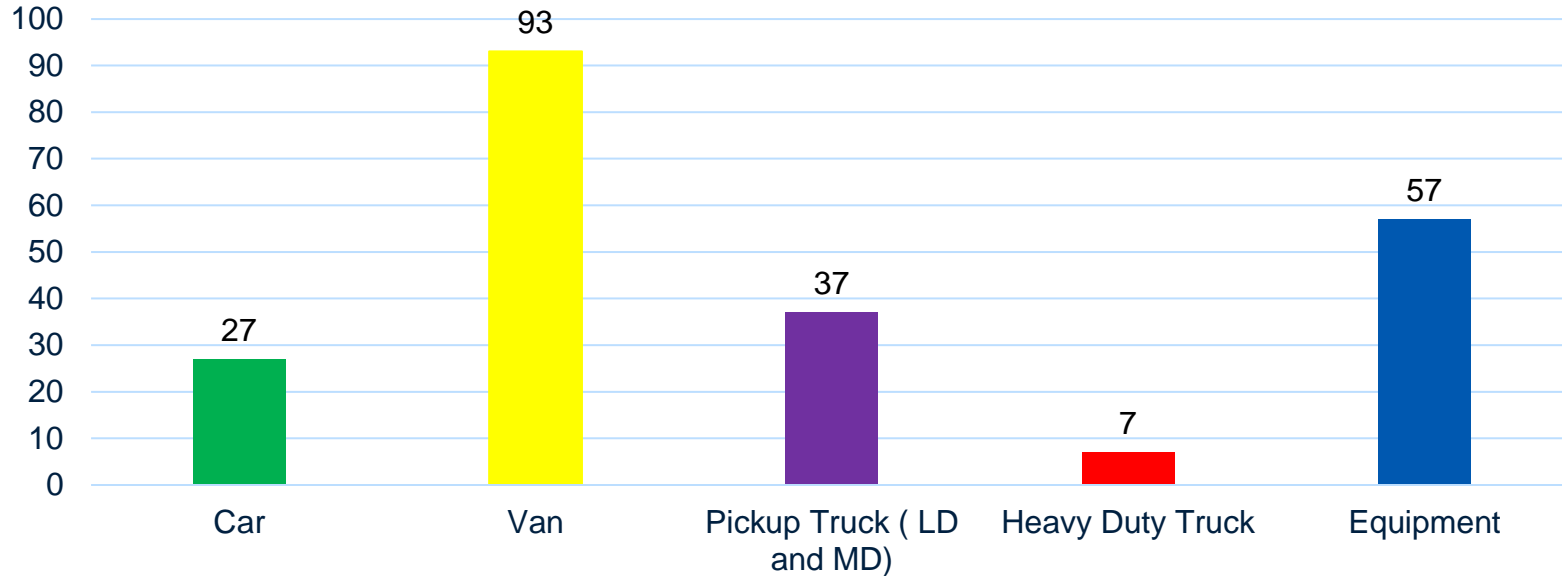
FACILITIES' VEHICLES BY FUEL TYPE



Total – 221 vehicles



FACILITIES' VEHICLES BY TYPE



Total – 221 Vehicles



CLIMATE ACTION PLAN 2030

- UBC's goal is to reduce GHG emissions by 85% by 2030.
- UBC Facilities currently has 13.12 % of its fleet which is Electric , CNG, or Hybrid.
- To meet CAP 2023 goal, on an average we have to replace 10% (approximately 20 vehicles, 1 to 2 vehicles every month) of our fleet every year with EV or low GHG emission vehicles to meet the target.
- Incorporate a Zero emission vehicle and Equipment first requirement into fleet policy for all new vehicles, where its operationally possible.



CHALLENGES TO MEET CAP 2030 TARGETS

- Average wait time for a new EV is between 4 months to 24 months (semiconductor chip shortage, limited supply of lithium ion battery, and supply chain delays).
- For some vehicle categories the cost of an electric vehicle is 50% to 100% more than conventional vehicle.

	EV	Gas / Diesel
Ford F - 150	\$93,500 (Lightning XLT)	\$54,000 (XL – Regular cab)
Ford Cargo Van	\$84,500 (E – Transit)	\$42,800 (Transit connect XL)



CHALLENGES TO MEET CAP 2030 TARGETS

- Limited options for Utility vehicles.
- EV charging station infrastructure.
 - a) Wait time for charging station ~ 4 months.
 - b) Limitation with level 2 charging stations and fleet allocation.



OPPORTUNITIES TO MEET CAP 2030 TARGETS

- EV rebate up to \$3000 for lease or purchase for qualifying new vehicles.
- EV Charging station rebate.
- Grants available from provincial government.
- Pre – order electric vehicles, even if we initially don't know the department of use (This will reduce wait time on EV).
- Promote the use of car share.



FACILITIES' FLEET POLICY

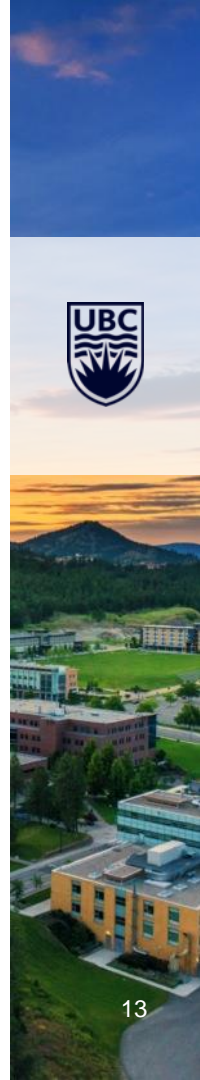
Implement updated fleet policy for all aspects of fleet operations.

- Acquisition, replacement, and disposal.
- Preventive maintenance, driver licensing restrictions, and garage insurance policy.
- Fueling stations management and charging infrastructure.
- Shared vehicle management and fleet parking.
- Driver training and anti-idling procedures.
- Accident reporting and investigation.
- Use of Planon on for vehicle inspection.



SHARED VEHICLE PROGRAM

- UBC Facilities currently has 13 vehicles in shared vehicle program.
- Rather than decommission a vehicle in good condition, we will consider moving it to shared vehicle program. Higher customer experience with more options.
- Regular audits to make sure all policies for shared vehicle program are followed.
- Use car share program as short-term rental ?



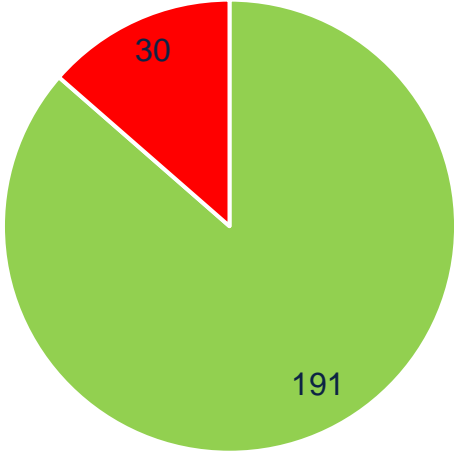
FLEET STANDARDIZATION / EV CHARGING INFRASTRUCTURE

- Limit UBC's fleet options to specific makes and model.
- Limited variety of fleet vehicles will increase productivity in garage and reduce time on driver training.
- USB building currently has 14 flo charging stations ready for use (in process of commissioning).
- We are looking into having level 3 ev charging station / super charger.



TELEMATICS

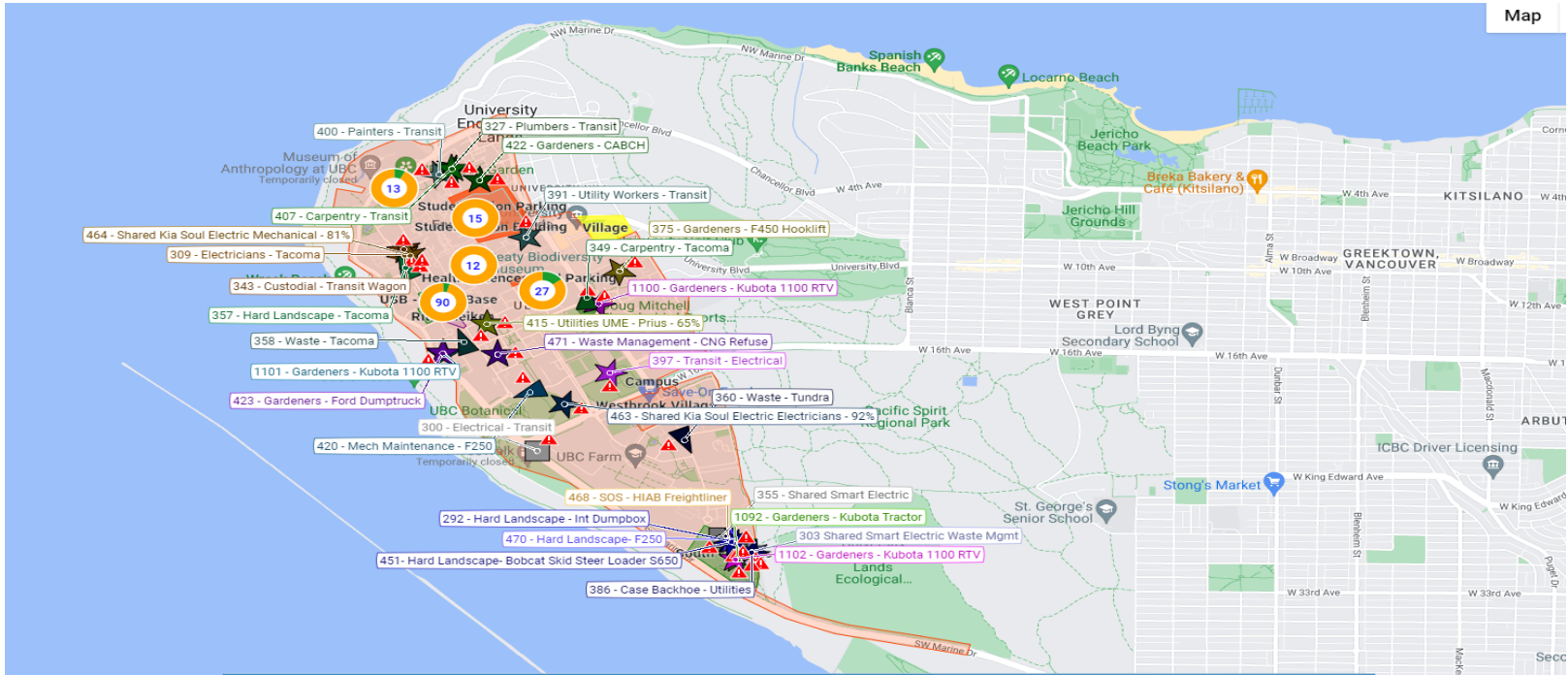
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TELEMATICS



THE UNIVERSITY OF BRITISH COLUMBIA

Operational Excellence

Finance & Operational Excellence

**CO2 Emmissions Report

Created Mar 28, 2023
 From Mar 01, 2023
 To Mar 31, 2023
 Distance Unit km
 Fuel Economy Unit L/100 km

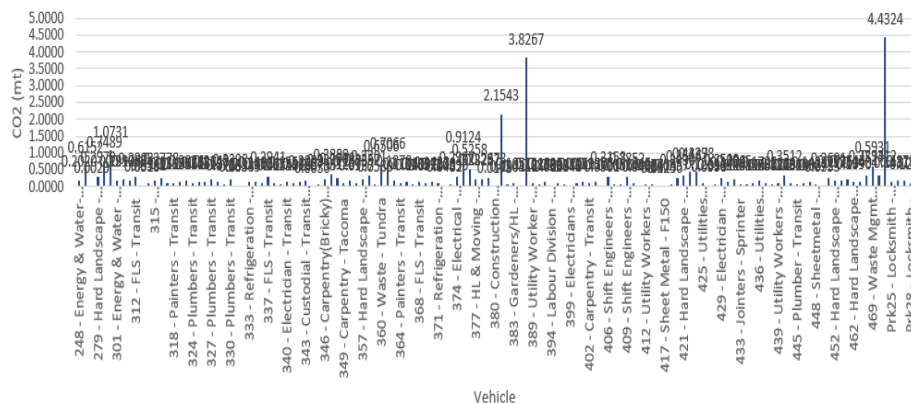
Report Description

This report uses engine based fuel economy data in order to calculate the estimated amount of CO2 emissions as a result of fleet activity. An especially useful report for companies who are looking to reduce their carbon footprint and contribute to the goal of a healthier environment. All relative units of measure are supported within the single report template.

**CO2 Emissions (mt)	
248 - Energy & Water- Plumber - Bread Truck	0.2020
264 - Moving Crew - GMC Cube Van	0.6152
269 - Hard Landscape - Freightliner	0.0029
279 - Hard Landscape - Int Dumpbox	0.2979
292 - Hard Landscape - Int Dumpbox	0.7489
294 - Wast Management - Compactor	1.0731
301 - Energy & Water - Sprinter	0.1992
302 - Plumbers - Sprinter	0.2106
308 - Carpenters - Transit	0.1963
312 - FLS - Transit	0.2903
313 - Millwright(Green/Teal) - Transit	0.0513
314 - Millwright - Transit	0.0962
315 - Shifty(Brown/Grey) - Transit	0.1703
316 - Shifty(Green/Teal) - Transit	0.2778
317 - Painter - Transit	0.1109
318 - Painters - Transit	0.1168
319 - Plasterer - Transit	0.1356
320 - Custodial - Transit	0.2026
324 - Plumbers - Transit	0.1155
325 - Plumbers - Transit	0.1637
326 - Plumber - Transit	0.1462
327 - Plumbers - Transit	0.2148
328 - Plumbers - Transit	0.1378
329 - Plumbers(brown/Grey) - Transit	0.0715
330 - Plumbers - Transit	0.2398
331 - Energy & Water- Plumbers - Transit	0.0353

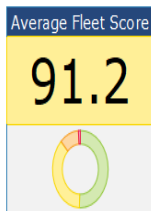
	Gallons		Litres		
	Gasoline	Diesel	Gasoline	Diesel	
carbon content per gallon (grams)	2,421	2,778	640	734	carbon content per litre (grams)
gallon	1	1	1	1	litre
grams	8,788	10,084	2,322	2,664	grams
kg/gallon	8.8	10.1	2.3	2.7	kg/litre

Vehicle CO2 Emissions



Date Range	
From	Mar 21, 2023
To	Mar 28, 2023
Days	7

Fleet Distance (km)	15,261
Fleet Occurances	802



Rule	Weight
Hard Acceleration	10%
Harsh Braking	10%
Harsh Cornering	10%
Engine Abuse	20%
Seatbelt	20%
Speeding	30%
100%	

Weight

i Adjust the weight each rule has on the total score. The weights must amount to 100%.

Classifications	
Low Risk	95
Mild Risk	75
Medium Risk	60
High Risk	0

Risk

i Adjust the expectation fleet by input desired score for each classification

Name	Group	Distance (km)	Total Score	Scoring Classification	Hard Acceleration	Harsh Braking	Harsh Cornering	Engine Abuse	Seatbelt	Speeding	Total Occurances
302 - Plumbers - Sprint Vehicle, All Vehicles, Plur		71.45	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
301 - Energy & Water - Vehide, All Vehicles, Utili		99.80	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
308 - Carpenters - Trar Vehicle, All Vehicles, Car		100.77	93.6	Mild Risk	100.0	100.0	84.0	100.0	100.0	84.0	2
309 - Electricians - Tacc Vehicle, All Vehicles, Elev		66.54	92.7	Mild Risk	100.0	100.0	100.0	100.0	100.0	75.8	1
303 Shared Smart Ele Vehicle, Waste Manager		35.12	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
369 - CAIT - Transit Vehicle, All Vehicles, CAI		46.66	96.6	Low Risk	100.0	100.0	65.5	100.0	100.0	100.0	1
Prk28 - Locksmith - Tra Vehide, All Vehicles, Loc		94.48	89.8	Mild Risk	100.0	100.0	100.0	100.0	100.0	65.9	2
371 - Refrigeration - Tr Vehicle, All Vehicles, Ref		64.31	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
368 - FLS - Transit Vehicle, All Vehicles, Fire		120.85	98.7	Low Risk	86.7	100.0	100.0	100.0	100.0	100.0	1
364 - Painters - Transit Vehicle, All Vehicles, Pair		49.03	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
370 - Electrical - Transit Vehicle, All Vehicles, CAI		170.14	94.3	Mild Risk	100.0	100.0	100.0	100.0	100.0	81.1	2
372 - Carpentry - Trans Vehicle, All Vehicles, Car		6.24	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
366 - Steamfitter - Trar Vehicle, All Vehicles, Ste		121.83	88.1	Mild Risk	100.0	100.0	100.0	100.0	100.0	60.4	3
367 - Carpentry(Roofe) Vehicle, Construction Of		27.14	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
373 - Painters - Transit Vehicle, All Vehicles, Pair		70.75	90.9	Mild Risk	77.3	100.0	100.0	100.0	100.0	77.3	2
356 - Shared Smart ele Vehicle, All Vehicles, Sha		0.27	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
352 - Shared Smart Ele Vehicle, API Testing, All		79.15	89.8	Mild Risk	100.0	100.0	59.3	100.0	100.0	79.7	3
355 - Shared Smart Ele Vehicle, All Vehicles, Sha		23.97	100.0	Low Risk	100.0	100.0	100.0	100.0	100.0	100.0	0
320 - Custodial - Transi Vehide, All Vehicles, Cus		151.92	73.5	Medium Risk	89.4	78.8	57.6	100.0	100.0	36.4	13
316 - Shifty(Green/Tea) Vehicle, All Vehicles, Shif		259.80	97.5	Low Risk	100.0	100.0	93.8	100.0	100.0	93.8	2
350 - Carpentry (Roofe) Vehicle, All Vehicles, Car		140.84	96.6	Low Risk	100.0	100.0	100.0	100.0	100.0	88.6	1



DRIVER TRAINING

We use ARI Holman's training modules for driver training. Our plan is to develop UBC's own driver training program for all our operational needs. Meanwhile, Here is the list of some of the training modules currently offered by ARI.

- Managing vehicle speed
- Avoiding backing collisions
- Changing lanes
- Safe braking
- Driving & Adverse weather and more.

If someone in your department needs any form driver training please contact Fleet and Asset Manager.



QUESTIONS ?





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