

# Green Fleet Update and Strategy

February 2021



# Current Fleet Policies / Initiatives

- ▶ Corporate Fleet Sustainability Policy
- ▶ Engine Idling Policy
- ▶ Fleet Operator Manual
- ▶ Equipment training programs



# Automatic Vehicle Location (AVL)



Search [ ] Options [ ] Summary [ ] Live positions [ ] Report [ ] Add zone [ ] Map options [ ]

### Trips History

02/10/21

Map [ ] Satellite [ ]

Wed Feb 10	
Total stop duration	2h 27m
Total driving duration	1h 56m
Total idling duration	6m 46s
Total Distance	67km

- test [ ]  
1495 Hardy St, Kelowna, BC V1Y 7W9, Canada  
Stopped 13:01 - 08:08  
Stop duration 19h 6m  
Idling 56s
- Driving 08:08 - 08:26  
Driving duration 18m 31s  
Distance 11km  
Unnamed Road, Kelowna, BC V1V 2C5, Canada
- Stopped 08:26 - 08:30  
Stop duration 3m 18s  
Idling 3m 18s
- Driving 08:30 - 08:54  
Driving duration 24m 29s  
Distance 14km
- test [ ]  
1495 Hardy St, Kelowna, BC V1Y 7W9, Canada  
Stopped 08:54 - 09:01  
Stop duration 7m 26s

# MODDO Partnership Agreement (2018)

- ▶ Staff at City hall can book MODDO cars
- ▶ Eliminated under-utilized fleet at City hall
- ▶ Helped MODDO get established in Kelowna



# R100 Fuel

- ▶ Kelowna is currently only City outside of Vancouver receiving a limited supply of R100 (Renewable diesel)
- ▶ 200,000L of R100 equates to:
  - ▶ reduction of approx. 329 tonnes CO<sub>2</sub>e/yr; or
  - ▶ 11.3% reduction in Fleet GHGs; or
  - ▶ 66 passenger cars removed from road.

# E3 Fleet Review

- ▶ Independent national program for measuring performance of public and private fleets against green standards for performance
- ▶ analysis of key performance indicators and opportunities for improvement
- ▶ Kelowna participated in 2011 and implemented most recommendations
- ▶ Fleet Services planning to participate in 2021

# Low Emissions Vehicles



# Hybrids (21)



Hybrid Dozer - landfill



# EV cars (8), PHEV (1)



# Low Speed EVs (3)



Might-E truck - landfill

# Bikes/Trikes (14)

## Electric Bikes (5)



# Current Challenges

- ▶ Limited availability of ZEVs
  - ▶ EV Pickup trucks, vans coming 2021/2022
  - ▶ HFCEVs
- ▶ Electrical Charging Capacity
  - ▶ Likely need upgrades at Fleet facilities



# Hydrogen Fuel Cell EV (HFCEV)

- ▶ Some advantages
  - ▶ More suitable for large vehicles (batteries are heavy)
  - ▶ No charge time (large batteries charge slowly)
  - ▶ Solves range issues
- ▶ Limited availability (station coming to Kelowna)
- ▶ Cost of Hydrogen Fuel in future?
- ▶ Blue hydrogen - hydrogen derived from natural gas, typically 80-90% lower emissions
  - ▶ Alberta well positioned to make low-cost blue hydrogen
- ▶ Green hydrogen (made from water – electrolysis)  
"zero" emissions

# Green Fleet Strategy

- ▶ Staff have been updating existing Sustainability policy, developing a new Green Fleet Strategy
- ▶ New "CleanBC Go Electric Fleets Program" announced Feb. 1
  - ▶ Training / advisory services
  - ▶ Rebates for Fleet assessments
  - ▶ Facility infrastructure assessments
  - ▶ Upgrade of electrical infrastructure
  - ▶ Installation of charging stations

# Funding Eligibility

- ▶ Voluntary pledge required to “convert 10% of the City of Kelowna’s light duty vehicle fleet to Zero Emissions Vehicles by 2023”
  - ▶ Would require City to acquire approx. 10 more ZEVs by 2023
  - ▶ Staff feel this is attainable

# Corporate Alignment

- ▶ The proposed strategy:
  - ▶ Helps achieve the goal of reducing Corporate emissions 12% below 2007 levels by 2022;
  - ▶ Helps fulfill some of the commitments of the Community Climate Action Plan;
  - ▶ Aligns with Council Priority “Greenhouse gas emissions are decreasing”



# Council Resolution:

THAT Council receive for information the February 22, 2021 update of the Infrastructure Operations Manager regarding green fleet initiatives;

AND THAT Council approve a pledge to West Coast Electric Fleets to “convert 10% of the City of Kelowna’s light duty vehicle fleet to Zero Emissions Vehicles by 2023” as required by the CleanBC “Go Electric Fleets” Program;

AND THAT Council directs staff to apply for funding towards a Corporate Green Fleet Strategy and for the installation of infrastructure through the Go Electric Fleets Program;

AND THAT Council supports staff to execute all documents necessary to complete the grant, if successful;

AND THAT the 2021 Financial Plan be amended to include these projects upon grant approval, with the City’s share of funding to come from the Fleet Services green initiatives operating budget and the Energy Management reserve.

# Questions?

