



Regional District of Central Okanagan

Green Vehicle and Equipment Policy Implementation Plan 2021-2040



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DEFINITIONS

Alternative Fuel means a fuel that can power a motor but does not include petroleum-based fuels. Examples of alternative fuels include biofuel, hydrogen, electricity, methane, and natural gas.

Board means the duly elected and appointed officials of the Board of Directors of the Regional District of Central Okanagan.

CAO means the individual appointed by the Board to the position of Chief Administrative Officer (CAO) as the head of Administration.

Battery Electric Vehicles (BEV) means vehicles powered by a battery that is charged by plugging the vehicle in to charging equipment. EVs always operate in all-electric mode and have typical driving ranges from 150 to 300 miles¹.

Green Vehicles and Equipment means managing vehicle and equipment life cycle activities with a focus on sustainable outcomes, including the reduction of GHG emissions.

Hybrid Electric Vehicles (HEV) means vehicles powered by an internal combustion engine and an electric motor that uses energy stored in a battery. The vehicle is fueled with gasoline to operate the internal combustion engine, and the battery is charged through regenerative braking, not by plugging in¹.

Life Cycle Activities means the planning, acquisition, operation, maintenance, and disposition of assets.

Light Duty Vehicles means vehicles up to and including a Gross Vehicle Weight Rating (GVWR) of 3,856 kg. Vehicle types include: sedans, compact SUVs, SUVs, and trucks (up to F-150 and 1500 series trucks).

Management or Manager(s) means a person or group of persons employed by the Regional District having executive (administrative or supervisory) authority.

Plug-In Hybrid Electric Vehicles (PHEV) means vehicles powered by an internal combustion engine and an electric motor that uses energy stored in a battery. PHEVs can operate in all-electric (or charge-depleting) mode. To enable operation in all-electric mode, PHEVs require a larger battery, which can be plugged in to an electric power source to charge. To support a driver's typical daily travel needs, most PHEVs can travel between 20 and 40 miles on electricity alone, and then will operate solely on gasoline, similar to a conventional hybrid¹.

Rightsizing means finding the optimal size required to perform the necessary function(s).

Zero-Emission Vehicles (ZEV) means a vehicle that has the potential to produce no tailpipe emissions. They can still have a conventional internal combustion engine, but must also be able to operate without using it². ZEVs include BEV, PHEV, and Hydrogen Fuel Cell vehicles.

¹ 'Alternative Fuels Data Centre', *U.S. Department of Energy Website*, year N/A, <https://afdc.energy.gov/vehicles/electric.html> , (accessed 28-06-2021).

² 'Zero-emission vehicles', *Government of Canada Website*, 2020, <https://tc.canada.ca/en/road-transportation/innovative-technologies/zero-emission-vehicles#/find/nearest?country=CA> (accessed 28-06-2021)

CONTEXT

Created in 1967, the Regional District of Central Okanagan (RDCO) is one of 27 Regional Districts in the Province of British Columbia. It is made up of two unincorporated electoral areas and the four-member municipalities of Kelowna, West Kelowna, Peachland and Lake Country. The Regional District provides region-wide services such as parks, garbage collection, and 9-1-1 emergency telephone service. It also provides sub-regional and inter-regional services, such as dog control, and sewer. The Regional District acts as a general local government for electoral areas, providing services such as potable water, fire protection, and community halls.

Regional District assets such as vehicles and equipment are owned by individual services and not owned by a centralized department. The RDCO has chosen to centralize the maintenance and asset planning of vehicles and large equipment through the Fleet Services Program in order to ensure the consistency of asset life-cycle activities. Other equipment, including small equipment (i.e. mowers, generators), and facility or process related equipment (i.e. pumps, large generators, HVAC equipment) is managed and maintained by the department responsible for the delivery of associated services.

BACKGROUND

As a signatory of the B.C. Climate Action Charter, the RDCO is committed to becoming carbon neutral in its corporate operations. As such, the District is focusing on reducing greenhouse gas (GHG) emissions. The reduction of GHG emissions can be accomplished in various ways, one being the introduction of alternative fuel vehicles and equipment into organizational vehicle and equipment pools, another being the incorporation of generally accepted green vehicle and equipment strategies into everyday operations.

In 2019 the Regional Board passed resolution #230/19, directing staff to draft a policy and covering report on the acquisition of electric and hybrid vehicles into the Regional District's vehicle fleet. To that end the RDCO Green Vehicle and Equipment Policy was developed and adopted in 2020. Following the adoption of the Policy, the Board asked staff to develop a policy implementation plan outlining the actions necessary for greenhouse gas emission reduction within the organization's vehicle and equipment pools.

PURPOSE

The purpose of this plan is to provide a roadmap for the implementation of the RDCO's Green Vehicle and Equipment Policy. The plan includes implementation actions, short and long term targets, and timelines regarding the 'greening' of vehicles and equipment. Setting goals and taking action in an environment of continuous change is challenging. This document and the information in it is designed to allow for operational agility, while ensuring ongoing accountability.

SCOPE

The Green Vehicle and Equipment Policy Implementation Plan applies to all vehicles and equipment owned and/or operated by the Regional District of Central Okanagan, including:

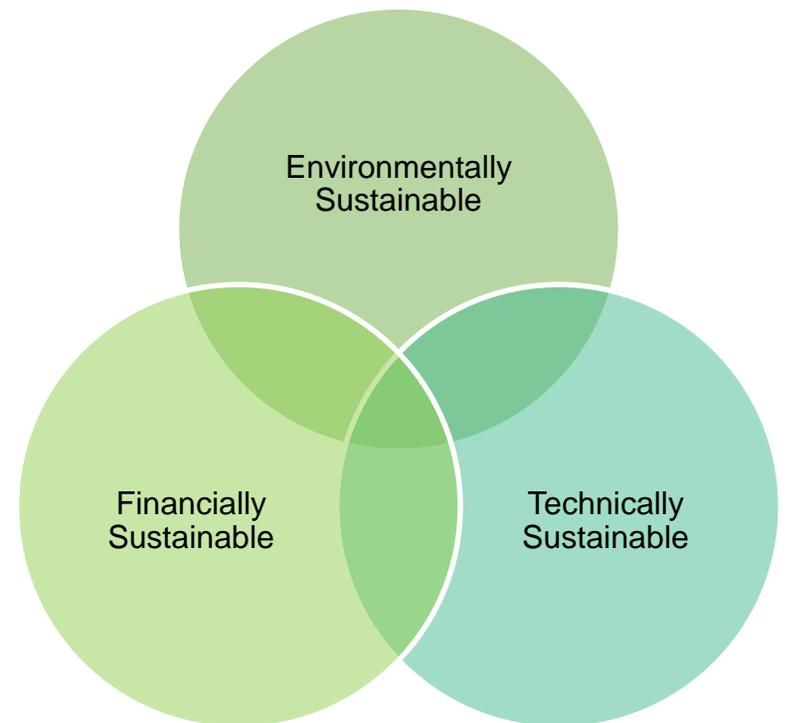
- vehicles
- large equipment (over \$2500)
- facility related equipment (ex. HVAC equipment)
- process related equipment (pumps and generators)

Equipment related to Information Technology is not included in the scope of this plan.

PRINCIPLES

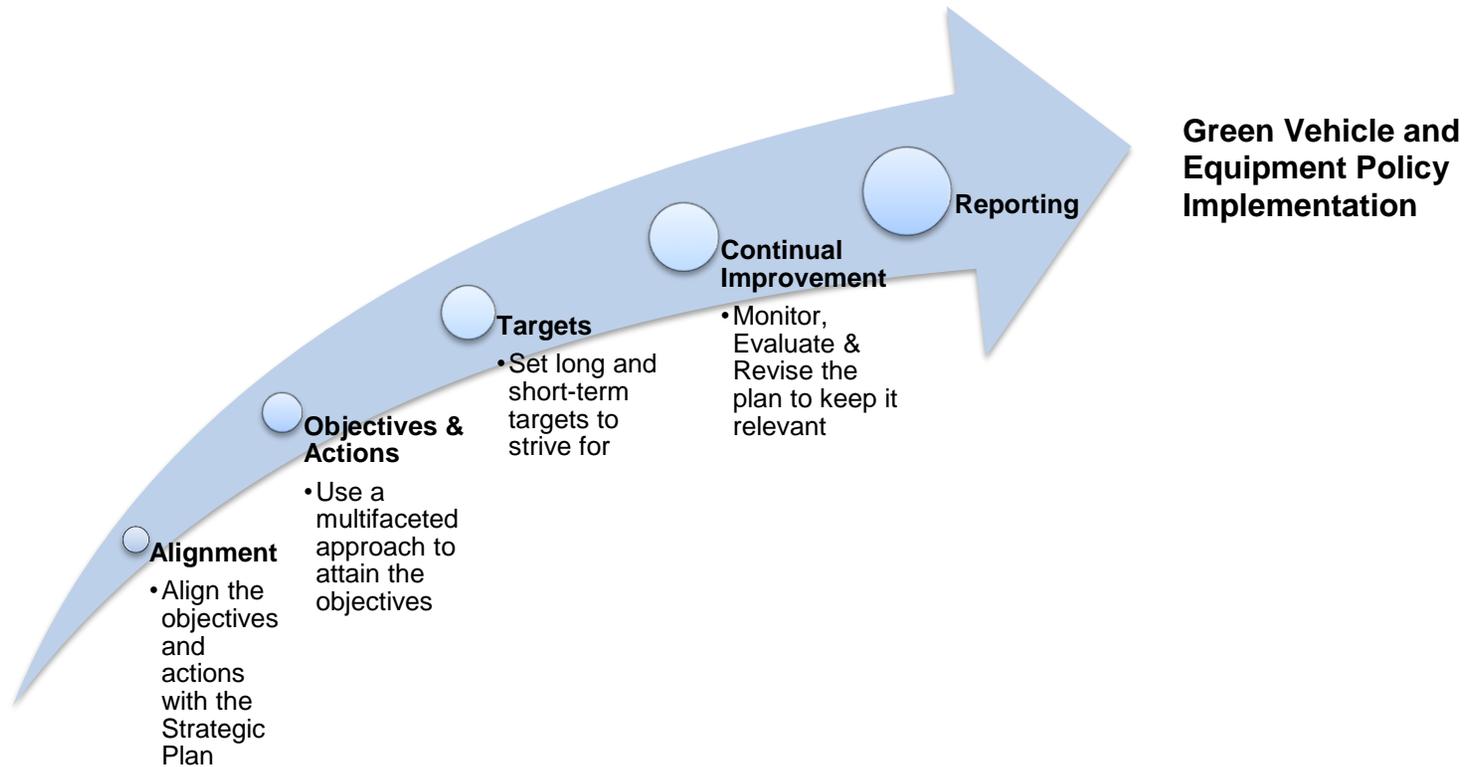
In order to encourage resilience and alignment when purchasing vehicle and equipment assets, it is recommended that the following principles be considered and weighed equally. Is the asset...

- **Environmentally Sustainable**
Reducing GHG emissions, incorporating alternative fuel, and conserving fuel and energy in operations where feasible
- **Technically Sustainable**
Meeting technical needs, meeting safety requirements, and meeting regulatory requirements
- **Financially Sustainable**
Maximizing return on investment, ensuring that the cost of the asset is appropriate for the service budget available, considering total cost of ownership



STRATEGY

The current market for green technology is changing so rapidly that the implementation of the new RDCO Green Vehicle and Equipment Policy must be flexible in nature in order to capture value while reducing asset related, and corporate risks. The RDCO will successfully implement the Green Vehicle and Equipment Policy by aligning the Plan with the Strategic Priorities, using a multifaceted approach to attain the objectives, setting short and long-term targets, continually improving on internal processes, and reporting to the Board annually.



Alignment:

The actions outlined in this plan align with the Regional Board 2019-2023 Strategic Priorities through the RDCO Green Vehicle and Equipment Policy objectives.

PRIORITY AREA	PRIORITY AREA GOAL
Environment	<p>The Regional District of Central Okanagan (RDCO) will initiate and support efforts to reduce our environmental footprint, adapt to climate change and connect with nature.</p> <ul style="list-style-type: none">▪ Regional District of Central Okanagan 2019-2023 Strategic Priorities Plan
POLICY	POLICY GOAL
Green Vehicle and Equipment Policy	<p>As a signatory of the B.C. Climate Action Charter, the Regional District of Central Okanagan is committed to reducing the amount of greenhouse gas emissions produced by the vehicles and equipment used in the delivery of RDCO services.</p>
OBJECTIVES	
#1	<ul style="list-style-type: none">• Incorporating alternative fuel vehicles and equipment into operations where financially and technically sustainable;
#2	<ul style="list-style-type: none">• Rightsizing vehicles, equipment, and overall fleet size; and
#3	<ul style="list-style-type: none">• Conducting all fleet and equipment life cycle activities in a manner supporting efficiency and return on investment while reducing petroleum use.

Attaining the Objectives

Objective 1 - Incorporating Alternative Fuel

- Prioritize replacement of highest fossil fuel consuming vehicles & equipment
- Set long and short term purchasing targets (zero-emission vehicles)

Objective 2 - Rightsizing

- Utilize a standard approach when renewing vehicles and equipment across the organization – New Acquisition Forms
- Renew vehicles and equipment in a timely manner
- Report to the Board annually on fleet expansion, linking additional units to a change in services provided.

Objective 3 - Efficient Life-Cycle Activities

- Include 'green' vehicle and equipment purchasing guidelines in 2021 update to the RDCO Purchasing Procedures
- Prioritize preventative maintenance
- Prioritize operator and fleet mechanic training

Short-Term Targets

- Replace 10% of all light duty vehicles in the RDCO fleet with zero-emission vehicles by 2025
- Implement life-cycle actions listed this plan

Long-Term Targets

- Align long-term zero- emission light duty vehicles implementation goals with the timeline provided in the Province of British Columbia's Zero-Emission Vehicle Act (30% ZEVs by 2030, 100% ZEVs by 2040)
- Reduce Corporate Greenhouse Gas Emissions by replacing vehicles and equipment fueled by petroleum based fuels with vehicles and equipment fueled by alternative fuels (small and large engines)

Plan Monitoring, Evaluation & Revision

Monitoring and evaluating the success of this plan will be the responsibility of organizational Senior Leadership, Department Directors, Department Managers, and the Fleet Services Supervisor. Further to in-house fleet evaluations, third-Party Fleet Review Reports will be undertaken every four years to allow for external subject matter expert perspective on implementation progress and potential plan revisions.

The initial review of the fleet is currently underway (2021) and being undertaken by the Richmond Sustainability Project's E3 Fleet Review Team. It is recommended that future fleet reviews also be undertaken by third-party subject matter experts specializing in, fleet sustainability, zero-emission technology and government processes.

Plan revision is a key component to adapting to future changes of external and internal demand drivers. This Plan is meant to be a living document and can be revised as needed. All revisions of the plan will be presented to the Regional Board and align with the general RDCO policy review process as per the recommendations of the CAO.

Reporting

It is recommended that the following information be included in a report brought forward to the RDCO Governance and Services Committee or the Regional Board annually:

1. Progress on the activities listed in this plan
2. Progress on the implementation of Zero-Emission Vehicles (ZEV), specifically the rate of light duty vehicle replacement with Zero Emission Vehicles (target: 10% ZEVs by 2025)
3. The following percentages (report current values and show comparison over the previous three-year time period):
 - Percent of large equipment (over \$2500) replaced with alternative fuel options
 - Percent of light duty vehicles replaced with alternative fuel options (includes HEV, PHEV, and EV)
 - Percent of medium and heavy vehicles replaced with alternative fuel options (includes HEV, PHEV, and EV)
 - Number of units per department fleet expansion (Vehicle and Equipment Request Acquisition Form)
4. Corporate Greenhouse Gas Emissions (unless already reporting through a required report, historically the CARIP report)

ACTION PLAN

OBJECTIVE #1 Incorporating alternative fuel vehicles and equipment into operations where financially and technically sustainable				
ACTIVITY	TARGET DATE	RESOURCES REQUIRED	LEAD PERSON	FEQUENCY OF ACTION
Conduct Facility Assessments to Accommodate Electric Chargers <ul style="list-style-type: none"> • ADMINISTRATIVE BUILDING – 002 • EECO CENTRE - 142 • DOG POUND - 046 • WASTEWATER TREATMENT PLANT – 401 	2021	<ul style="list-style-type: none"> • Staff time • Operating funds: • \$3500 – 002 • \$3500 – 142 • 046 - assessment covered by grant • 401 – Self assessment 	<ul style="list-style-type: none"> • Senior Energy Specialist 	<ul style="list-style-type: none"> • Once 2021 • As required to meet the needs of the fleet
Install Electric Charging Infrastructure	2022	<ul style="list-style-type: none"> • Staff time for coordination • Grant funding available to cover part of capital costs • Payback and maintenance program available through FortisBC 	<ul style="list-style-type: none"> • Senior Energy Specialist 	<ul style="list-style-type: none"> • One time
Update applicable capital plans as per Appendix C <ul style="list-style-type: none"> • Capital plans must be approved by the Regional Board before purchases can take place 	2022	<ul style="list-style-type: none"> • Staff time 	<ul style="list-style-type: none"> • Department Directors 	<ul style="list-style-type: none"> • Updates to capital plans will be ongoing
Replace fleet units with ZEV vehicles <ul style="list-style-type: none"> • 10% of light duty fleet 	2025	<ul style="list-style-type: none"> • Staff time for coordination 	<ul style="list-style-type: none"> • Fleet Services 	<ul style="list-style-type: none"> • One time

OBJECTIVE #2 Rightsizing vehicles, equipment, and overall fleet size				
ACTIVITY	TARGET DATE	RESOURCES REQUIRED	LEAD PERSON	FEQUENCY OF ACTION
Implement New Vehicle and Equipment Request/Acquisition Forms across the organization <ul style="list-style-type: none"> Justification of fleet expansion Forms attached as Appendix B & C 	2021	<ul style="list-style-type: none"> Staff time 	<ul style="list-style-type: none"> Department Staff 	<ul style="list-style-type: none"> Review and update form every four years
Implement Standard Vehicle Useful Life and Disposal timeframes across organization. <ul style="list-style-type: none"> Renew vehicles in a timely manner 	2021	<ul style="list-style-type: none"> Staff time 	<ul style="list-style-type: none"> Department Managers, Fleet Services 	<ul style="list-style-type: none"> Review and update useful life and disposal timeframes across every four years
Conduct Third Party Fleet Reviews <ul style="list-style-type: none"> Purpose of the Fleet Review is to provide third party insight into the environmental sustainability of the RDCO Fleet 	2021	<ul style="list-style-type: none"> Fleet Services Staff time to collect data Initial review cost is \$2500 (E3 Fleet Review) 	<ul style="list-style-type: none"> Fleet Services 	<ul style="list-style-type: none"> Every four years
Replace the highest fossil fuel consuming light duty vehicles with a high resale value at five years instead of ten years: <ul style="list-style-type: none"> Based on results of Third Party Fleet Review 	2022	<ul style="list-style-type: none"> Fleet Services Staff Time 	<ul style="list-style-type: none"> Fleet Services 	<ul style="list-style-type: none"> Every four years

OBJECTIVE #3 Conducting all fleet and equipment life cycle activities in a manner supporting efficiency and return on investment while reducing petroleum use

ACTIVITY	TARGET DATE	RESOURCES REQUIRED	LEAD PERSON	FREQUENCY OF ACTION
<p>Update the RDCO Administrative Purchasing Procedures Document to include the following:</p> <ul style="list-style-type: none"> ▪ Where applicable, include low emission criteria and/or energy use evaluation criteria in Vehicle and Equipment Procurement Processes (RFPs, Request for Quotes, etc.) (for vehicles and equipment not included in the ZEV category). ▪ Include a preference for low GHG emission and low energy use alternatives in all facility and process related equipment purchases (i.e. HVAC systems, pumps, and WWTP process equipment). ▪ Include a requirement for all service providers utilizing RDCO vehicles and equipment to maintain the equipment to industry and/or required standards. ▪ Include a request for a supplier buy-back option in the vehicle procurement process, whereby the dealership or ‘seller’ of the vehicle provides the RDCO with a buy-back price up to five years after initial vehicle purchase. 	2021	<ul style="list-style-type: none"> • Purchasing Consultant Time 	<ul style="list-style-type: none"> • Purchasing Consultant 	<ul style="list-style-type: none"> • Update procedures every four years
<ul style="list-style-type: none"> • Complete the implementation of Preventative (scheduled) Maintenance across all RDCO vehicles and equipment. 	2021	<ul style="list-style-type: none"> • Staff time • Cost of preventative maintenance 	<ul style="list-style-type: none"> • Fleet Services 	<ul style="list-style-type: none"> • Update procedures every four years
<ul style="list-style-type: none"> • Provide BEV Maintenance Training for Fleet Mechanics 	2022	<ul style="list-style-type: none"> • Staff time • Cost of Training 	<ul style="list-style-type: none"> • Fleet Services 	<ul style="list-style-type: none"> • Continual training as per industry recommendations
<ul style="list-style-type: none"> • Provide Equipment and Vehicle Operators with training – Fuel Efficient Driving 	2022	<ul style="list-style-type: none"> • Staff time • Cost of Training 	<ul style="list-style-type: none"> • Fleet Services 	<ul style="list-style-type: none"> • Continual training per industry recommendations