



CITY OF WEST KELOWNA

COUNCIL POLICY MANUAL

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Date: November 17, 2021

Adoption Date: December 14, 2021

SUBJECT: Emission Reduction Policy

Purpose:

To establish an Emission Reduction Policy that will guide the City of West Kelowna (CWK) in reducing greenhouse gas (GHG) emissions while considering environmental, technical and financial sustainability.

Background:

As a signatory of the B.C. Climate Action Charter, the CWK is committed to becoming carbon neutral in its corporate operations. As such, the City 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, another being the incorporation of generally accepted green vehicle and equipment strategies into everyday operations.

As a relatively new City, with a relatively new fleet management system, staff have been considering when the appropriate time would be to introduce an Emission Reduction Policy. Several factors played into this decision, one being, the availability of electric charging stations when the construction of a new city hall and operations yard is completed. In addition, many areas of the electric and hybrid automotive industry are still in their infancy when it comes to this new technology and, from a finance perspective, very cost prohibitive

Policy:

The current market for green technology is changing so rapidly that the implementation of the new CWK Emission Reduction Policy must be flexible in nature in order to capture emerging technologies. The CWK will successfully implement the Emission Reduction Policy by aligning the Policy with Councils Strategic Priorities, using a multifaceted approach to attain the objectives, setting short and long-term targets, continually improving on internal processes. Periodic reporting back to Council on the Policy's progress is intended.

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.

Council means the duly elected and appointed officials of the City of West Kelowna.

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

Battery Electric Vehicles (BEV)

EVs, also called battery electric vehicles, have a battery that is charged by plugging the vehicle in to charging equipment.

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 CWK 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.

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)

SCOPE

The Emission Reduction Policy applies to all vehicles and equipment owned by the CWK, including:

- Vehicles (cars and trucks)
- large non licensed equipment (generators and pumps)
- large operational equipment (dump truck and loaders)

PRINCIPLES

In order to encourage resilience and alignment when purchasing vehicles and equipment it is recommended that the following should 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

OBJECTIVES

This policy is intended to be a living document. During the life of the implementation plan Councils Strategic Priorities are anticipated to change. Flexibility within the policy will attempt to align itself with Councils current priorities while meeting target emission dates.

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. A new Acquisition Form will identify what the unit is exactly needed for.
- Renew vehicles and equipment in a timely manner, as defined in the CWK Vehicle and Equipment Replacement, Acquisition and Disposition Policy.
- Report to the Council periodically 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 the CWK Vehicle and Equipment Acquisition, Replacement and Disposition Policy.
- Prioritize preventative maintenance – potentially aided by GPS vehicle operations data.
- Prioritize operator and fleet mechanic training.

Short-Term Targets

- Set goals to replace 10% or better of all light duty vehicles in the CWK fleet with zero-emission vehicles by 2025.
- Implement life-cycle actions listed in this Policy.

Long-Term Targets

- Align long-term zero-emission light duty vehicles implementation goals as is feasible with the timelines provided in the current Province of British Columbia's Zero-Emission Vehicle Act.
- 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)

Policy Monitoring, Evaluation & Revision

Monitoring and evaluating the success of this Policy will be the responsibility of the Directors, Fleet manager, Purchasing manager and fleet support staff.

Policy revision is a key component to adapting to future changes of external and internal demand drivers. This Policy is meant to be a living document and can be revised as needed. All revisions of the Policy will be presented to Council and aligned with the general CWK 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 Council periodically:

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. Reporting on percentages (report current values and show comparison over the previous three-year time period):
 - Percent of large equipment 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)

SHORT TERM ACTION PLAN

OBJECTIVE #1 Incorporating alternative fuel vehicles and equipment into operations where financially and technically sustainable				
ACTIVITY	TARGET DATE	RESOURCES REQUIRED	LEAD PERSON	FREQUENCY OF ACTION
Install Electric Charging Infrastructure	2022	<ul style="list-style-type: none"> • Staff time for coordination • Rebates available to cover part of capital costs • Payback and maintenance program available through FortisBC 	<ul style="list-style-type: none"> • Project Managers • Parks & Fleet Op. Manager 	<ul style="list-style-type: none"> • One time
Consider implementing a GPS fleet tracking software system that monitors engine performance and idling.	2022	<ul style="list-style-type: none"> • Staff Time • Ongoing annual costs 	<ul style="list-style-type: none"> • Parks & Fleet Op. Manager 	<ul style="list-style-type: none"> • Ongoing

Update the Vehicle and Equipment Acquisition, Replacement and Disposition Policy to include electric vehicles however useful life cycle not to be reduced for the purpose of reaching emission targets.	2022	<ul style="list-style-type: none"> • Staff time 	<ul style="list-style-type: none"> • Purchasing Manager • Parks & Fleet Op. Manager 	<ul style="list-style-type: none"> • Periodic Review
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"> • Parks & Fleet Op. Manager 	<ul style="list-style-type: none"> • One time
Source Vehicles with anti idling options	2022	<ul style="list-style-type: none"> • Staff time 	<ul style="list-style-type: none"> • Fleet Manager 	<ul style="list-style-type: none"> • Annually

OBJECTIVE #2 Rightsizing vehicles, equipment, and overall fleet size				
ACTIVITY	TARGET DATE	RESOURCES REQUIRED	LEAD PERSON	FREQUENCY OF ACTION
Implement New Vehicle and Equipment Request/Acquisition Forms across the organization <ul style="list-style-type: none"> • Justification of fleet expansion 	2022	<ul style="list-style-type: none"> • Staff time 	<ul style="list-style-type: none"> • Department Staff • Fleet Manager 	<ul style="list-style-type: none"> • Review and update form 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 CWK Vehicle 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.) ▪ Include a requirement for all staff utilizing CWK vehicles and equipment to maintain the equipment to industry and/or required standards. 	2022	<ul style="list-style-type: none"> • Purchasing Consultant Time 	<ul style="list-style-type: none"> • Purchasing Manager • Parks & Fleet Op. Manager 	<ul style="list-style-type: none"> • Update procedures periodically
<ul style="list-style-type: none"> • Improve on existing Preventative (scheduled) Maintenance across all CWK vehicles and equipment, considering the use of GPS data. 	2022	<ul style="list-style-type: none"> • Staff time • Cost of preventative maintenance 	<ul style="list-style-type: none"> • Parks & Fleet Op. Manager 	<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"> • Parks & Fleet Op. Manager 	<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"> • Parks & Fleet Op. Manager 	<ul style="list-style-type: none"> • Continual training per industry recommendations
<ul style="list-style-type: none"> • Reach out to neighboring municipalities investigating opportunities for group buying savings 	2022	<ul style="list-style-type: none"> • Staff time 	<ul style="list-style-type: none"> • Fleet manager • Purchasing Manager 	<ul style="list-style-type: none"> • Annually

LONG TERM ACTION PLAN

- Consider a Policy update in 2025 when short term target objectives are complete.
- Long term planning to take into account new and evolving technologies.
- Long term planning to involve financial modeling to meet the 30% ZEV target in 2030.
- Long term planning to align with realistic product availability.
- All planning objectives to align with Councils Strategic Priorities.
- Should Council wish to continue supporting the BC Climate Action charter, long term planning should reflect its directives.