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**To:** Richmond City Council  
**From:** Mayor Malcolm D. Brodie  
Chair, General Purposes Committee  
**Re:** **GREEN FLEET POLICY**

**Date:** December 5, 2006  
**File:** 02-0780-00/Vol 01

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The General Purposes Committee, at its meeting held on Monday, December 4<sup>th</sup>, 2006, considered the attached report, and recommends as follows:

**Committee Recommendation**

- (1) That "City Vehicles – Alternative Fuel Sources Policy No. 2006" (adopted on April 22<sup>nd</sup>, 1991), be rescinded.*
- (2) That the proposed "Green Fleet Policy" (as per the report dated November 24<sup>th</sup>, 2006, from the Environmental Coordinator), be adopted.*
- (3) That a letter be written to the Prime Minister and to Richmond's MPs to offer support for the 1-Tonne Challenge and to encourage the continuation of this program.*

Mayor Malcolm D. Brodie, Chair  
General Purposes Committee

Attach.

VARIANCE

Please note that Committee added Part (3) above.

## Staff Report

### Origin

The City's fleet represents a significant investment, both in terms of financial and natural resources. The City of Richmond has undertaken numerous initiatives to promote and develop more sustainable forms of fleet management that increase operational efficiency, reduce costs, minimize harmful emissions and support more sustainable economic development. However, the City's current policy pertaining to fleet management is limited in scope. This report proposes the adoption of a Green Fleet policy which better reflects the City's comprehensive approach to fleet management.

### Background

#### *Vehicle Impacts*

The production, use and disposal of motor vehicles are responsible for impacts on the environment, human health and quality of life, including impacts on local air quality and the generation of greenhouse gases that contribute to global climate change. In the Lower Fraser Valley, air emissions from vehicles (light duty, heavy duty and non-road) account for 55% of nitrogen oxide (NO<sub>x</sub>) emissions which cause smog and 36% of carbon dioxide (CO<sub>2</sub>) emissions that attribute to climate change (GVRD, 2002). Vehicle emissions are one of the major sources of contaminants polluting the airshed that in turn impact our health. Health Canada notes that each year thousands of people become unnecessarily ill because of air pollution, with children, elderly people and those with respiratory problems being most heavily impacted.

Vehicles also represent a significant operational cost for the City, both in terms of overall management and fuel costs. Fuel expenditures tend to represent approximately 18% of the total operating fleet budget.

#### *Current City Practices*

Over the past several years, a number of programs and initiatives have been undertaken by the City to reduce impacts of operating the City's corporate fleet (Attachment 1). Key initiatives include:

- Council resolution to replace compact fleet vehicles with hybrids or Smart Cars
- Implementing idle-free initiatives
- Use of alternative fuels, including biodiesel.

The City is currently in the process of implementing a new automated fuel management and dispensing system. The new system will enable fuel consumption to be tracked based on class of vehicle and driver. This more accurate accounting and reporting of fuel usage will enable better management of vehicle maintenance which in turn, is anticipated to result in improved operational efficiency and lower costs.

## Analysis

The current City policy - *City Vehicles – Alternative Fuel Sources Policy #2006* was adopted in 1991 (Attachment 2). This policy states that all City vehicles of one tonne and greater shall be replaced at the end of their economic lives with vehicles using diesel fuel. The proposed amended “Green Fleet” policy takes a broader approach, aiming to consider the full suite of fleet best management practises (e.g. low carbon technologies, biodiesel, “right-sizing” of vehicles, operational efficiencies etc.). The proposed policy also allows greater flexibility to advance our “Green Fleet” initiatives based on technological advances and changes in emission standards. The objectives of the new policy strive to:

- encapsulate the broad range of action that the City is currently undertaking, from vehicle procurement through to education and public awareness, under a strong policy framework
- provide a cost-effective approach, which balances corporate leadership and sustainability objectives with immediate financial constraints
- balance fleet management issues including cost, safety and efficiency, while maintaining the flexibility to adopt new technologies as they become cost effective and available
- evaluate needs and options for new vehicle procurement, fleet conversion and retrofits, ongoing maintenance activities and operational practices
- establish an anti-idling performance requirement for City operations
- establish a reporting mechanism for fleet management
- provide a mechanism to effectively convey corporate fleet practices to Richmond community and other interested groups.

The broader outcomes of the policy aim to:

- support the City’s financial sustainability goals by making wise upfront investments and yield cost savings over the long-term
- contribute to community sustainability through human health protection, resource conservation, minimization of emissions and wastes, and support of sustainable economic development
- provide a strong framework for communicating corporate practices to the Richmond community and other interested parties.

## Financial Impact

There are no direct costs associated with the implementation of this policy. The policy provides staff with a broad decision making framework for managing the City fleet. Certain initiatives will result in immediate cost savings (i.e. vehicle downsizing), while others will result in higher up-front costs (i.e. anti-idling technology, low emission vehicles, etc.) with the expectation of longer-term cost savings in fuel consumption, etc. Any significant initiatives would be brought forward for individual consideration and approval, including cost-benefit analyses. In accordance

with the policy, consideration will be given to life-cycle costs, wise use of resources, social health benefits and best economic value.

### **Conclusion**

The City's fleet assets are significant City investments that warrant a comprehensive decision making framework in terms of management of the resource. The goal of the proposed Green Fleet Policy is to achieve the highest, most cost-effective fleet performance and ultimately best value for the City of Richmond. The policy achieves this goal by bringing together all initiatives under a single corporate policy and provides a flexible framework by which staff can evaluate best practises and make decisions for the future. The policy takes into account life cycle and cost benefit analyses; establishes an effective communication tool to relay corporate practises to the Richmond community and other interest groups; and identifies a monitoring and reporting mechanism for measuring progress.

Julie A. Beer, M. Sc, P. Geo  
Environmental Coordinator  
(4230)

JB:jb

## Attachment 1: Current City Green Fleet Initiatives

Action Category	Initiatives	Status
Acquisition	Resolution to purchase Hybrids/Smart Cars <ul style="list-style-type: none"> <li>in place of standard compact cars</li> </ul>	On-going
	Full Cost Accounting Procurement <ul style="list-style-type: none"> <li>Incorporates lifecycle costs, current emission standards, consideration of alternative technologies as part of purchasing RFP process.</li> </ul>	On-going
	“Right – sizing” Vehicles <ul style="list-style-type: none"> <li>2002 – replacing ¾ tonne trucks with ½ tonne trucks</li> </ul>	On-going
	Electric Ice Resurfacer <ul style="list-style-type: none"> <li>Replaced propane powered ice machines with zero emission Electric Ice Re-Surfacers</li> </ul>	Completed
Operational Efficiency	Catalytic Converters <ul style="list-style-type: none"> <li>Grant from Environment Canada and GVRD Sustainability Enterprise Fund to retrofit pick-up truck with catalytic converter</li> </ul>	Completed
	Use of 5% Biodiesel <ul style="list-style-type: none"> <li>90% of current diesel vehicles operated using a 5% blend of biodiesel</li> </ul>	On-going
	Works Yard Idle-Free Campaign <ul style="list-style-type: none"> <li>As part of a fuel reduction plan for the City a program was developed to reduce unnecessary idling for Work Yard operations</li> </ul>	On-going
	Automated Fuel Management & Dispensing System <ul style="list-style-type: none"> <li>Allows accurate tracking of fuel consumption based on class of vehicle and driver</li> </ul>	Being Developed
Education & Awareness	1-Tonne Community Challenge <ul style="list-style-type: none"> <li>The City worked in partnership with the Richmond School District, the Airport Authority, and Private Sector under a grant from the Federal Government to encourage Richmond community to reduce their GHG emissions by 1-tonne</li> </ul>	Complete
	Idle-Free School Program <ul style="list-style-type: none"> <li>The 1-Tonne Community Challenge partnership and works yard idle free program helped catalyze an idle-free initiative at Richmond schools. This effort is being led by Richmond students and is being supported by the City</li> </ul>	On-going
Research & Innovation	Biodiesel Feasibility Pilot Project <ul style="list-style-type: none"> <li>Implemented pilot program to evaluate feasibility of using biodiesel and implemented use as a result of this feasibility study</li> </ul>	Completed
	Use of 20% Biodiesel <ul style="list-style-type: none"> <li>Implement use of 20% blend of biodiesel as age &amp; warranty of vehicles permits</li> </ul>	Proposed
	Use of Low Voltage Emergency Equipment <ul style="list-style-type: none"> <li>E.g. LED and halogen light boards, 2-way radios etc.</li> </ul>	Pilot
	Hydrogen Fuel Cell Technology <ul style="list-style-type: none"> <li>Examined potential to use hydrogen fuel cell vehicles to replace standard small cars and pick-up trucks</li> </ul>	Non-viable at this time due to distance from hydrogen source

Attachment 2: Existing Fleet Policy



**City of Richmond**

**Policy Manual**

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Adopted by Council: Apr. 22/91

POLICY 2006

File Ref: 0780-00

CITY VEHICLES – ALTERNATIVE FUEL SOURCES

**POLICY 2006:**


It is Council policy that:

All City vehicles of 1 ton and greater shall be replaced, at the end of their economic lives, with vehicles using diesel fuel.

(Public Works Division)

113094

# Attachment 3: Proposed Green Fleet Policy

 <b>City of Richmond</b>		<b>Policy Manual</b>
Page 1 of 1	Draft – Proposed Amendment to Policy No.2006	Policy
File Ref:	Green Fleet Policy	
<p><b>Policy :</b> It is Council policy that <i>in recognition that the production, use and disposal of motor vehicles result in significant impacts to human health and environment, and pose a sizeable cost requirement for the City, the City of Richmond will seek to:</i></p> <ul style="list-style-type: none"><li>• be a leader in incorporating innovation and leading-edge technology in the management of its fleet, and</li><li>• manage its corporate fleet according to the following Green Fleet objectives and performance standards.</li></ul> <p><b>1. <u>Acquisition</u></b> Purchases of new vehicles will be conducted in accordance with the City's Environmental Purchasing Policy and specifically aimed at:</p> <ul style="list-style-type: none"><li>• minimizing overall fleet,</li><li>• using the smallest size vehicles available to meet assessed need</li><li>• using vehicles with highest fuel efficiency and cost effectiveness based on considerations of life-cycle costing and financial investment requirements</li><li>• maximizing the use of alternative fuels and technologies.</li></ul> <p>Efficiency performance standards will be incorporated into bid specifications.</p> <p><b>2. <u>Operational Safety and Efficiency</u></b> The City's fleet will be operated in a manner which:</p> <ul style="list-style-type: none"><li>• maintains high safety standards</li><li>• maximizes manufacturer recommended performance standards</li><li>• supports, implements and complies with current operations and emissions standards</li><li>• incorporates technologies to accurately measure individual vehicle emissions</li><li>• ensure optimal vehicle operations and minimize emissions and fuel consumption</li><li>• adopts new technologies, including retrofits, aimed at improving fuel efficiency and reducing emissions, wherever practicable and cost effective</li><li>• prevents non-purposeful idling of City vehicles</li><li>• supports alternative transportation programs for City employees</li></ul> <p>The City's driver/operator training program will include education on:</p> <ul style="list-style-type: none"><li>• operational practices for maximizing fuel efficiency and reducing emissions (e.g., minimizing travel distances, anti-idling, etc.)</li><li>• increasing safety, and</li><li>• encouraging acceptance of alternate technologies and approaches.</li></ul> <p><b>3. <u>Education and Awareness</u></b> The City will work in partnership with the Richmond community and other agencies to support community-wide green fleet initiatives, wherever practicable and cost effective.</p> <p><b>4. <u>Monitoring and Reporting</u></b> Corporate fleet practices, including annual fuel consumption, will be monitored and reported on in the City's State of Environment reporting program.</p> <p>*****</p>		