Engineering Department – Fleet Operations
Climate Protection Program

The City of Victoria operates a fleet of approximately 340 vehicles. This inventory produces 60% of the corporation's eCO_2 emissions from energy usage.

Since 1997, the Fleet Operations have been actively pursuing initiatives that reduce emissions and lessen the impact we have on the local environment. These initiatives address fleet size, vehicle fuel economy, alternative fuels and driver education.

Current emissions profile

CO_2 Tailpipe Emissions	
2005	**2006**
2203 metric tonnes	**2041 metric tonnes**

Fleet Profile

In 1998 efforts were taken to reduce the overall size of the fleet (422 units) by 10% and a further 10% reduction during 1999. This was accomplished by identifying and eliminating underutilized vehicles, resource sharing and utilizing short term lease or rental vehicles for seasonal programs.

At the same time, efforts were taken to ensure that the City's fleet was appropriate to the task. This resulted in a move away from larger vehicles to more compact fuel efficient models.

Actions

- Continue efforts to "right size" the fleet
- Ensure minimum fuel economies are listed as a selection criteria for new vehicles
- Continue to encourage vehicle sharing between departments/sections
- Develop standardize vehicle specifications for all vehicle classes

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Alternative fuels

Alternative fuels offer the most immediate opportunity for emission reductions in the short term. Compressed natural gas, biodiesel and ethanol have all been shown to reduce tailpipe emissions significantly.

The Engineering Department operates a high speed, high pressure natural gas refueling facility at its works yard and currently runs 72 light duty vehicles on this fuel.

In 2004, the Engineering Department undertook a field test of biodiesel. As a result of this successful test biodiesel has now replaced petroleum diesel in all departmental diesel vehicles.

Actions

- Consider replacing older gasoline powered vehicles with newer technology diesel powered units..
- Continue efforts to convert gas powered vehicles to compressed natural gas
- Position the city to begin using ethanol when it becomes available locally by incorporating “flex fuel” technology as a selection criteria for new acquisitions
- Include Ethanol as a fuel choice in future fuel supply contracts.

Driver Education

How a vehicle is operated has a direct impact on its fuel consumption and consequently the emissions produced. Idling, rapid acceleration and speeding all have significant impacts on fuel use.

The Engineering Department has adopted an "Anti Idling" program and has provided training in "driving for economy" to primary vehicle operators.

Actions

- Use on board diagnostic recording equipment to develop an idling baseline
- Continue reinforcing anti idling habits among drivers
- Develop incentives for operators to reduce fuel consumption
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Other Initiatives

The Engineering Department has introduced other initiatives in the Fleet area also designed to reduce our impact on the environment. These include

- "Dry Shop" procedures to eliminate the accidental release of harmful liquids to the storm/sewer system
- Replacement of high VOC solvent based parts washers with hot water based bio-remediation technology
- Install solar power panels on service vehicles to power emergency lighting and equipment thereby eliminating the need for idling
- Provide shop staff with ongoing training in spill response and environmental protection.
- Capture and treat all contaminated shop wastes including antifreeze, oils and filters

Actions

- Continue efforts to utilize solar power on vehicles
- Develop a "green procurement" policy for fleet purchases
- Specify "flex fuel" technology in all new light to medium duty vehicle purchases

Alternative technologies

Hybrid gas/electric vehicles have made the jump from development to market while others such as hydrogen, electrical and hybrid diesel electric powered vehicles are all still in developmental stages. The inherently higher acquisition costs for gas/electric hybrids make them a less affordable selection for emissions reductions as other strategies such as alternative fuels. These types of vehicles have not been in service long enough to prove their long term reliability and consistent fuel economies.

Actions

- Continue to monitor the evolution of hybrid technologies
- Solicit current users of hybrid technology for their experience and observations
- Continue to monitor the development of electric vehicle technology
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