

## **COMMITTEE OF THE WHOLE – SEPTEMBER 18, 2006**

### **GREEN FLEET PROGRAM – IMPLEMENTING NEW TECHNOLOGY TO REDUCE VEHICLE EMISSIONS**

#### **Recommendation**

The Chair of the Vaughan Environmental Task Force recommends:

1. That as the first step towards a Green Fleet Program, ten vehicles, as chosen by the Fleet Department, be retrofitted with advanced catalytic converter technology by March 2007 and
2. That staff report back on the full implications of the following:
  - i. tenders for new fleet leases or purchases require proponents to install vehicle emissions technologies, which eliminate up to 100% of engine emissions, on the new vehicles;
  - ii. existing motorized equipment (e.g. lawnmowers, tractors, etc.) be reviewed and selected for retrofits
  - iii. tenders for functions performed by external contractors, involving the use of motorized equipment, require successful proponents to demonstrate that vehicle emissions technologies have been installed or used in their motorized equipment.

#### **Economic Impact**

The retrofit of ten vehicles will have a budgetary impact of \$12,400. Funds are available from the Fleet Department's Vehicle Reserve Fund. The full impact of requiring all contracts to meet the requirements is unknown at this time.

#### **Background – Analysis and Options**

Governments at all levels, are consumers of goods and services, including energy. The choices made in day-to-day operations and purchasing policies have a direct effect on the environment. There is a well-established link between combustion of fossil fuels and public health, air quality and climate change. Corporate fleets are responsible for a significant portion of the air pollutants emitted in the course of municipal operations.

The City of Vaughan's Environmental Task Force has been examining the various measures that may be undertaken to reduce vehicle emissions. The City enacted an Anti-Idling Bylaw and erected signage around its facilities encouraging motorists not to idle their vehicles. Furthermore, Vaughan is a supporter of Smart Commute North Toronto Vaughan, an organization assisting employers and other trip generators to find alternative transportation methods to the single-occupant vehicle.

In an effort to broaden the approaches to reduce vehicle emissions, the Economic & Technology Development Department, in co-operation with the Fleet Department, examined cleaner fleet technologies as a possible way to reducing emissions. In January 2006, the Fleet Department began a pilot study to retrofit one of the oldest vehicles with a Dry Selective Catalyst (DSC) converter from GESi. Emissions test were performed on the vehicle at a Drive Clean facility. Prior to retrofitting, the test showed that the vehicle emitted 230 ppm of carbon monoxide (CO), 278 ppm of nitrogen oxide (NO) and 284 ppm of NO<sub>x</sub>. Emissions testing after the retrofit showed that engine emissions were reduced to 0%.

The GESi pilot study was presented to the Environmental Task Force (ETF) on October 31, 2005. Following this presentation, the ETF also received presentations from Enbridge Gas on natural gas conversion opportunities for City fleet vehicles. Having received both presentations and the costs and benefits of both options, the ETF at its meeting on May 23, 2006 requested the Commissioner of Community Services to bring back a report on moving forward with green fleet initiatives.

The recommendations of this report could have three widespread effects: changing municipal purchasing policies, conversion of City-owned vehicles and equipment and changes to external contractor practices. Implementing cleaner vehicle emissions (converter) technology on new purchases or leases, has the immediate effect of reducing vehicle emissions for the overall corporate fleet. As fleet acquisition occurs, the City will have an increasingly cleaner fleet delivering services required by a growing population.

The conversion of ten existing, older City vehicles is the first step, demonstrating the City's commitment to clean air. In addition to the corporate fleet, small equipment such as tractors, lawnmowers, leaf blowers and other equipment also contribute to greenhouse gas emissions and climate change. This equipment should also be evaluated for their emissions and where possible, cleaner technologies should be implemented.

Eventually if the proposed purchasing policy changes are made, the City will begin to shape changes in the private sector, encouraging them to take emission reduction measures in order to win the City's business. The City's environmental leadership will carry over to other businesses and industry sectors as increasing demand for environmental technologies and products has the effect of driving down the costs of these products over time.

While these proposed changes are environmentally positive, the full implications of making these changes are as yet unknown.

### **Relationship to Vaughan Vision 2007**

The proposed recommendations contained in this report conforms with Vaughan Vision 2007 Goal A-3: Safeguard the Environment.

### **Conclusion**

The City of Vaughan has a fleet of approximately 300 vehicles on the road at any given time, performing vital tasks and services for residents and businesses. Municipal operations have environmental implications, however, the City can take actions to reduce greenhouse gas emissions without compromising service delivery.

The first step of the Green Fleets Program will implement technology on ten vehicles by March 2007, eliminating up to 100% of engine emissions for these vehicles. The proposed changes to municipal purchasing policies, as well as those of its contractors, are ways to implement sustainable vehicle technology on a wider basis; clearly demonstrating the City's leadership role in reducing its environmental footprint and encouraging sustainable practices throughout the community. These changes also have financial and legal implications for the City, and staff should report on these implications.

### **Report prepared by:**

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Respectfully submitted,

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