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Halifax Regional Council
April 6, 2003

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:

A handwritten signature in black ink, appearing to read "Mike Labrecque".

Mike Labrecque, Director, Real Property & Asset Management

DATE: March 29, 2004

SUBJECT: Biodiesel Pilot Project Completed with Transit Fleet

INFORMATION REPORT

ORIGIN

In August of 2003, Wilson Fuels approached Fleet Services, Real Property & Asset Management, with a proposal to supply biodiesel fuel at approximately the same cost as diesel fuel, to be tested for use in the Metro Transit fleet. The Pilot Project proposal also included the offer to provide the fuel pumping station and storage tanks and to cover the cost of any resulting damages to equipment that might be caused by the biodiesel test fuel.

BACKGROUND

Greenhouse Gas is one of the leading causes for climate change which threatens to disrupt our environment. In 1997, Canada's transportation sector was reported as emitting 27 percent of national greenhouse gas (GHG) emissions. About 30 percent of transportation emissions were caused by urban passenger travel. However, public transit vehicles carrying millions of Canadians a year, were responsible for less than 0.3 percent of our national greenhouse gas (GHG) emissions.

As a result, the Canadian transit industry and its fleet and industry suppliers have been active for a number of years in carrying out research/test programs to help reduce greenhouse gas (GHG) emissions and to promote use of public transit as part of the solution in helping Canada meet its Kyoto commitment to reduce greenhouse gas (GHG) emissions. The Kyoto Protocol commits

several dozen countries to slowing global warming by reducing their GHG emissions. Under Kyoto, Canada must meet GHG reduction targets every year between 2008 and 2012. The federal government's Transportation Climate Change Table concluded that "fast, convenient and reliable transit service is fundamental to any meaningful strategy to reduce GHG emissions from urban passenger transportation". Clearly public transit and its fleets can play a significant role in meeting Canada's Kyoto commitment.

In conjunction with HRM's ongoing Healthy Sustainable Community initiatives through the Federation of Canadian Municipalities and the federal Partners for Climate Protection programs involving greenhouse gas inventories, targets and local action plans, several HRM Business Units have been working diligently on their part of the solution for greenhouse gas (GHG) emissions. Within HRM, fleet and buildings account for approximately 75 percent of the total greenhouse gas emissions produced as an organization.

Over the past ten years, Fleet Services and Metro Transit have participated in a number of pilot projects working with manufacturers in using alternative fuels such as methanol and propane and outfitting buses with diesel fuel emissions reduction kits. Work is ongoing in the continued search for cost efficient and effective ways to reduce greenhouse gas emissions.

DISCUSSION

The Fleet Services division of Real Property & Asset Management (RPAM), in conjunction with Metro Transit, Environmental Management Services, and Wilson Fuels has recently completed a 3 month long pilot project testing the use of biodiesel fuel in transit buses.

Prior to agreeing to conduct the test program with Wilsons Fuels, RPAM staff contacted several bus fleet divisions in Canada and the USA, whom had conducted similar test programs using biodiesel fuels. The discussions focussed mainly on other properties' experiences in testing biodiesel and in determining that there were no detrimental effects resulting from the testing of biodiesel fuel in existing diesel engines.

After the background research was done, the rather unique test of using fish oil in twenty (20) Metro Transit buses began on December 15th, 2003. The fuel used was a mixture of 80 percent diesel and 20 percent fish oil, which is known as "Bio 20%" or "B20". The test which was completed on March 15th, was very successful with the buses running on biodiesel for three months with no major operational concerns. The fuel consumption has been relatively consistent between pure diesel and biodiesel. Tailpipe tests have shown some decreases in smoke, which indicates emissions levels may be reduced.

Staff will continue to work with Natural Resources Canada on a substantial testing cycle starting in early summer which will more clearly define the level of emissions reduction. In other biodiesel tests conducted using vegetable oils and animal fats, reductions of 12 % to 18% in greenhouse gas (GHG) emissions have been achieved.

