

Report of: Interim Business Manager, City Works

To: Executive Board

Date: 6 November 2006

Item No:

Title of Report : Procurement of Vehicles for Oxford City Council
Motor Transport Fleet

Summary and Recommendations

Purpose of report: To enable the Executive Board to make a decision on the choice of fuel system used to run the next generation of small council vehicles.

Key decision: No

Portfolio Holder: Councillor Jean Fooks, Cleaner City

Scrutiny Responsibility: Environment Scrutiny

Ward(s) affected: All

Report Approved by

Portfolio Holder: Councillor Jean Fooks

Legal: Lindsay Cane

Finance: Andy Collett

Strategic Director: Sharon Cosgrove

Policy Framework:

Improving environments where we live and work

Recommendation(s):

Present the Executive Board: -

1. Approve the purchase of Euro 4 diesel powered vehicles under 3.5 tonne GVW, where suitable factory LPG vehicles are not available.
2. Approve the use of biodiesel throughout the fleet, used in as high a percentage as the industry and manufacturers will allow.
3. Authorise major project approval to seek new arrangements for the purchase of bio fuels and additives.

Introduction

1. Oxford City Council is committed to running a “Green Fleet”, which means choosing the most environmentally friendly method of delivering the service wherever possible.
2. With regards to road vehicles below 3.5 tonne gross vehicle weight, the policy in recent years has been to procure vehicles powered by liquid petroleum gas (LPG), wherever practical.
3. As with anything involving fast moving forms of technology, it is sensible to review policy regularly. In the past it was advantageous to buy LPG vehicles or have petrol vehicles converted, as the Government provided financial aid to cover the extra expense. With the demise of this grant scheme, known as “Powershift”, the cost once again has to be borne by the purchaser. A knock on effect of this grant scheme closing is that sales of LPG vehicles have dropped sharply, and the major manufacturers have dropped LPG vehicles from their range.
4. Rapid advances in engine design has made biodiesel an option as a replacement for LPG, for the council’s fuel needs. Below is a short analysis of the two types of fuel, with some information paraphrased from the Government’s Energy Saving Trust website, as of August 2006.

LPG

- i. It is generally accepted that LPG gives a 10-15% carbon dioxide reduction in comparison to petrol and is on a par with mineral diesel. LPG also delivers lower nitrous oxide emissions than diesel, along with zero particulate emissions.
- ii. LPG vehicles cost approximately 30% less to run than their petrol equivalents at the current fuel duty rate, and approximately the same as diesels.
- iii. To convert an existing petrol engine to run on LPG costs somewhere in the region of £2,000 - £3,000.
- iv. LPG is half the price of diesel to buy, although its calorific output is only 80% of diesel for a given weight - i.e. it produces 20% less energy.
- v. LPG produces lower nitrous oxide and particulate emissions than diesel.
- vi. The current VED (road tax) on an LPG van is £60 more per annum than a Euro 4 powered vehicle for the size in our scope.

- vii. No major manufacturer currently offers LPG vehicles; they only offer a very limited number of petrol variants in their range, which allows for an aftermarket conversion. The vehicle manufacturers do not warrant these LPG conversions, and residual values are lower.
- viii. The main cause of 'downtime' in the City Works LPG powered fleet relates specifically to the conversion. This type of fault can keep the vehicle off the road or running solely on unleaded petrol.

Biodiesel

- i. A reduction in some exhaust emissions from a properly set-up engine is a benefit of using biodiesel. It burns more completely than mineral diesel thus lowering PM10 (soot) emissions.
- ii. Depending on the production method and source, it is generally accepted that a 5% blend of biodiesel gives a 3% carbon dioxide reduction (well to wheel). A 5% blend gets 1p/l duty reduction over mineral diesel.
- iii. Diesel powered vehicles are cheaper to buy than LPG, more readily available and there is a wider choice.
- iv. When used in 5% blends with conventional 'mineral' diesel, biodiesel behaves almost identically. Consequently all motor manufacturers warrant their vehicles to run on the fuel. The lubricating properties of biodiesel can make engines run more smoothly.
- v. No conversion is needed to use biodiesel that meets EN590 standard. Running costs are approximately the same as LPG.
- vi. The current contract for the supply of road fuel is with the "Central Buying Consortium". Pace Petroleum is the provider of this contract. Currently Pace do not offer the range of biofuels or additives that we require for us to meet our aims.

Summary

The major benefit of LPG, its environmentally friendliness compared to diesel, is reduced by the technological advance of Euro 4 diesel engines.

The low duty price advantage of LPG is not guaranteed long term by current Government legislation.

The specifications and suitability needed for the fleet can be met more easily with Euro 4 diesel powered vehicles. Choice is wide and purchase price and residual values are more attractive.

With the more common availability of higher blends of biodiesel in the future, the advantages of diesel can only be magnified.

Recommendations

That the Executive Board agrees: -

1. To a change from LPG to Euro 4 diesel in vehicles below 3.5 tonne GVW.

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Background papers: none

