

REPORT  
Regular Council Meeting  
1992 March 23

THE CORPORATION OF THE DISTRICT OF BURNABY  
ENVIRONMENT AND WASTE MANAGEMENT COMMITTEE

HIS WORSHIP, THE MAYOR  
AND ALDERMEN:

SUBJECT: ALTERNATIVE FUEL - NATURAL GAS VEHICLES

RECOMMENDATION:

1. THAT Council receive this report for information.

R E P O R T

The Environment and Waste Management Committee, at its meeting held 1992 March 10 received and adopted the attached staff report which provides an update on recent development in alternative fuel vehicle technology and its potential application in Burnaby Municipal vehicle fleet.

The Committee therefore submits the report for Council's information.

Respectfully submitted,

Alderman L. Rankin  
Chair

Alderman D.P. Drummond  
Member

Alderman D. Evans  
Member

Alderman D. Lawson  
Member

Alderman C. Redman  
Member

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: COPY - ACTING MUNICIPAL MANAGER  
- DIRECTOR ENGINEERING

TO : CHAIRMAN & MEMBERS  
ENVIRONMENT & WASTE  
MANAGEMENT COMMITTEE

DATE : 1992 03 03

FROM : DIRECTOR ENGINEERING

FILE : 80-16-01

SUBJECT : ALTERNATIVE FUEL - NATURAL GAS VEHICLES

PURPOSE : To provide the Committee an update on recent development in alternative fuel vehicle technology and its potential application in Burnaby Municipal vehicle fleet.

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RECOMMENDATION :

1. THAT the Environment & Waste Management Committee receive and forward this report to Council for information.

REPORT

1.0 INTRODUCTION

The Environment & Waste Management Committee, at its meeting of 1991 November 12, received and adopted a staff report on alternative fuels for Burnaby fleet vehicles. One of the short term strategies outlined in the report that was subsequently considered and approved by Council is as follows :

*" that Burnaby defer the alternative fuels pilot project but continue to closely monitor the progress in the alternative fuel development and report back to Council on any potential applications in the future. "*

2.0 DISCUSSION

RECENT DEVELOPMENT

In a recent letter dated February 24, 1992 received from B.C. Gas, it was indicated that General Motors has achieved a major milestone in the alternative fuel vehicle technology and a limited supply of factory equipped natural gas 3/4 ton pickup trucks will be available this summer. Accordingly to GM, approximately 2,000 of these vehicles will be made for the North America market of which 200 may be made available to interested fleet operators in British Columbia.

PRODUCT DETAILS

The new natural gas vehicles are produced by the GMC Truck Division based on the Sierra 3/4 ton full size pickup model. Based on the vehicle specifications provided, the size and capacity of the natural gas model is the same as that for the gasoline powered model. The vehicles will be dedicated for natural gas only with a 320 km range at 3,600 psi. The fuel induction system and storage tanks are all factory installed. The natural gas system on board would add only approximately 70 kg to the base vehicle weight.

The natural gas vehicles as tested by GM meet the U.S. Federal and California Low Emissions Vehicle Standard for 1997 and fall well within the current Canadian Standard.

B.C. Gas indicated that they have committed to purchase 25 of these natural gas vehicles. B.C. Tel, City of Richmond and the District of West Vancouver have also shown interest in the purchase of a small number of these vehicles. According to the GM production schedule, the vehicles will be ready for delivery as early as July, 1992.

### **COST**

The additional premium for the natural gas vehicles is approximately \$3,500 Cdn with possible rebate from B.C. Gas. Under current operating condition and pricing structures, it is estimated that an average of \$100 per month of fuel costs could be realized with the use of the natural gas vehicle. The pay back period for the additional natural gas vehicle premium is 3.5 year excluding the possible rebate from B.C. Gas.

In the 1991 Engineering vehicles replacement program which is being prepared for tender, it includes a 3/4 ton pickup truck which can be replaced with the new GMC natural gas vehicle. There are sufficient funds available in the vehicles replacement account to cover the additional cost required. These funding expenditures are in conformance with the draft 1992 Provisional Capital Program.

### **3.0 CONCLUSIONS**

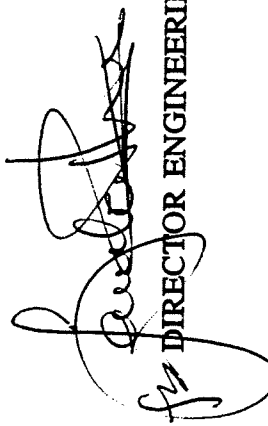
In earlier staff reports, it was indicated that from the viewpoint of emissions reduction objective, there is little or no benefit to be gained by converting existing vehicles from gasoline to alternative fuels operations because of advances in gasoline engine and fuel injection designs.

However, with the latest technology development in alternative fuels and the introduction of factory equipped natural gas vehicles by GM, staff are of the opinion that it is desirable for Burnaby to take the lead in improving air quality and vehicle emissions by purchasing one of these vehicles. This would also provide Burnaby the opportunity to evaluate the performance and cost effectiveness of the factory made natural gas vehicles before a long term strategy on the use of alternative fuel vehicles in the Municipal fleet is recommended.

Staff would intend to contact B.C. Gas and GM to confirm the availability of the new vehicle productions and to work toward the purchase of one of the vehicles for Burnaby municipal fleet uses.

LSC:jb

cc : Director of Finance

  
DIRECTOR ENGINEERING

