

THE CORPORATION OF THE DISTRICT OF BURNABY

TRANSPORTATION COMMITTEE

HIS WORSHIP, THE MAYOR  
AND ALDERMEN

Madam/Gentlemen:

REPORT OF THE TRANSPORTATION COMMITTEE

RE: B.C. TRANSIT USE OF ALTERNATIVE FUELS

RECOMMENDATION:

1. THAT this report be received for information purposes.

R E P O R T

At the regular Council meeting held on 1989 May 08, Council requested that staff investigate B.C. Transit's plans to change transit buses to cleaner fuel, such as natural gas, and to report the results of this investigation to the Transportation Committee.

In response to Council's direction the Director Planning and Building Inspection submitted a report (Attachment "A") to the Transportation Committee on 1989 August 24. The Transportation Committee adopted the following recommendation:

1. THAT the Transportation Committee express its support to B.C. Transit for a program to convert diesel buses to alternative fuels.

This is for the information of Council.

Respectfully submitted,

Alderman R.G. Begin  
Chairman

Alderman D.P. Drummond  
Member

Alderman J.M. Sawicki  
Member

**INTERNAL DISTRIBUTION:**  
AGENDA 1989 SEPTEMBER 05  
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- DIR. PL. & BLDG. INSP.

ATTACHMENT "A"

TO: CHAIRMAN AND MEMBERS  
TRANSPORTATION COMMITTEE  
1989 August 18

FROM: DIRECTOR PLANNING &  
BUILDING INSPECTION  
Our File: 08.201

SUBJECT: BC TRANSIT USE OF ALTERNATIVE FUELS

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RECOMMENDATION:

1. THAT the Transportation Committee express its support to BC Transit for a program to convert diesel buses to alternative fuels.

R E P O R T

At its regular meeting of May 8, 1989 during discussion of the North Burnaby Transit Area Plan, Council requested that staff prepare a report for the Transportation Committee on the use of cleaner fuels as alternative to diesel fuel. This report is written in response to this direction of Council.

In 1988, the U.S. Government passed legislation to impose new standards for diesel engine emissions. The standards set dramatically reduced limits for emissions of carbon dioxide, hydrocarbons, nitrous oxide and particulates into the atmosphere. American buses will be required to comply with the standards by 1991 followed by the trucking industry by 1994. At this point the Canadian Government has not opted to introduce similar legislation. Canada's position has been to await the further development of diesel engine technology in the U.S.

Currently the two leading manufacturers of diesel engines, Cummins and Allison-Detroit Diesel, are involved in research and testing of diesel engines using diesel fuel, natural gas and methanol. Initial results of these tests have indicated that diesel engines powered by diesel fuel will not be able to comply with the new pollution standards. Therefore, Cummins has pursued research into engines powered by natural gas while Allison-Detroit Diesel has been experimenting with methanol powered engines.

The Federal Government, through Energy Mines and Resources Canada, is promoting the use of alternative fuel for diesel vehicles by funding conversion of buses to use fuels including natural gas, propane and methanol. Currently four transit operations including the Toronto Transit Commission (TTC), Mississauga Transit, Hamilton Street Railway and BC Transit are all operating and testing buses under this program. The TTC, with partial funding by the Ontario Government, has converted 25 buses supplied by Ontario Bus Industries to natural gas and expects to have 125 buses in service by mid 1990. Hamilton Street Railway and Mississauga Transit operate 15 buses and 10 buses respectively.

A pilot project by BC Transit is funded by Energy Mines and Resources Canada, the Province of BC and BC Gas Corporation. BC Transit currently has a single diesel bus operating on natural gas and expects to have six vehicles by the end of 1989. These buses will operate in dual-fuel mode by starting on diesel fuel and running on natural gas. Each bus will carry seven natural gas tanks which can be filled in less than five minutes with a maximum range of 550km on full tanks.

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Although the capital cost of a natural gas powered bus is approximately 30-50 percent more than a standard diesel bus, tests have shown significant operating cost savings. At current fuel prices natural gas has been shown to be the cheapest fuel on a cost per kilometre basis. Natural gas also has a superior safety record relative to other alternative fuels such as methanol and propane. Another significant advantage is the presence of major natural gas reserves in the province.

In conclusion, all of the alternate fuels produce substantially lower emissions relative to diesel fuel and widespread conversion could yield significant air quality benefits. BC Transit should therefore be encouraged in its efforts to convert its entire diesel fleet to natural gas.



A.L. Parr  
DIRECTOR PLANNING &  
BUILDING INSPECTION

RG/kmg

cc: Municipal Manager

