

ITEM 11
MANAGER'S REPORT NO. 20
COUNCIL MEETING 92/03/23

TO: ACTING MUNICIPAL MANAGER 1992 MARCH 18

FROM: ACTING CHIEF PUBLIC HEALTH INSPECTOR

SUBJECT: B.C. HYDRO AND POWER AUTHORITY - BURRARD THERMAL GENERATING PLANT, IOCO, B.C., RENEWAL APPLICATION FOR PROVINCIAL ENERGY REMOVAL CERTIFICATE AND FEDERAL EXPORT PERMIT.

PURPOSE: TO INFORM THE COUNCIL ON RENEWAL APPLICATION FILED BY B.C. HYDRO AND POWER AUTHORITY, AND B.C. POWER EXCHANGE CORPORATION FOR ENERGY REMOVAL CERTIFICATE AND FEDERAL EXPORT PERMIT WHICH RESULTS IN INCREASED OPERATION OF THE BURRARD THERMAL GENERATING PLANT AND AN INCREASE IN EMISSIONS OF OXIDES OF NITROGEN

RECOMMENDATION:

1. THAT Council support filing of an intervention with British Columbia Utilities Commission (B.C.U.C.) on Renewal Applications filed by B.C. Hydro and Power Authority and B.C. Power Exchange Corporation for Provincial Energy Removal Certificate and Federal Export Permit which results in increased operation of the Burrard Thermal Generating Plant and an increase in emissions of oxides of nitrogen.
2. THAT G.V.R.D. direct further stringent emission requirements upon renewal of G.V.R.D. Air Emission Permit VA-330 expiring on 1992 April for the Burrard Thermal Generating Plant.
3. THAT a copy of this report be forwarded to Mr. Bob Smith, Administrator, Air Quality Control, Air Quality and Source Control Department, G.V.R.D., 4330 Kingsway, Burnaby, B.C., V5H 4G8.

REPORT

1.0 INTRODUCTION

Correspondence from the G.V.R.D. is being submitted for the regular Council Meeting on 1992 March 23 regarding the Regional District's filing of an intervention into the Renewal Applications of Provincial Energy Removal Certificate and Federal Export Permit by B.C. Hydro and Power Authority and its subsidiary, B.C. Power Exchange Corporation (POWEREX).

RENEWAL APPLICATION FILED BY
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The following report provides information on the subject renewal application which results in increased operation of the Burrard Thermal Generating Plant and an increase in the emissions of oxides of nitrogen. The report further recommends filing of an independent intervention with the B.C.U.C. on this issue.

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2.0 BACKGROUND

The Burrard Thermal Generating Plant opened in 1962 and has operated at various levels and frequencies since that time for the principal purposes of providing:

- a) Emergency and maintenance power generation during transmission outages caused by storms, etc. or the loss of major equipment for maintenance purposes,
- b) A back-up source of electricity to meet normal system demands when additional hydroelectric facilities are required and the completion of these projects is delayed, and
- c) General back-up of the hydroelectric generating resources during low water years.

In 1988, B.C. Hydro and Power Authority was given the permission to use the Burrard Thermal Generating Plant to support the export of energy and since that time, the use of Burrard Thermal has increased dramatically.

3.0 RENEWAL APPLICATION FOR PROVINCIAL ENERGY REMOVAL CERTIFICATE AND FEDERAL EXPORT PERMIT

B.C. Hydro and Power Authority and its subsidiary POWEREX jointly hold two Energy Removal Certificates (ERCs) to remove electricity to the United States and Alberta. Both of these ERCs expired on 1991 September 30.

The applicants have applied to the B.C. Minister of Energy, Mines and Petroleum and the National Energy Board (N.E.B.) for renewal of one ERC to remove electricity to the United States and Alberta on a short term basis for a period of six years beginning from 1991 October 01 to 1997 September 30. The application makes no allowance for the environmental impacts associated with burning fossil fuels in the Lower Fraser Valley.

The G.V.R.D. has filed an intervention with B.C.U.C. regarding the renewal application which will result in increased operation of the Burrard Thermal Generating Plant and a resultant increase in emissions of oxides of nitrogen from the Plant.

A Hearing before the B.C. Utilities Commission (B.C.U.C.) is scheduled to begin on 1992 April 06. The G.V.R.D., in their correspondence, have stated that direct involvement of all G.V.R.D. and Fraser Valley municipalities would strongly support the District's position before the Commission, and have suggested that each municipality file individual interventions with B.C.U.C.

4.0 AIR EMISSIONS FROM THE BURRARD THERMAL GENERATING PLANT

The Burrard Thermal Generating Plant is a natural gas-fired hydroelectric generating station, thus oxides of nitrogen are the principal contaminants discharged from these sources. The emissions of the subject contaminant is one of the factors in the formation of ozone in the ambient air.

According to the G.V.R.D., the Burrard Thermal Generating Plant is responsible for emitting up to 5% of total oxides of nitrogen in the Lower Fraser Valley while operating at a full capacity. Since Burrard Thermal relies on off-peak natural gas, it tends to operate most extensively during summer months when the risk of ozone episode is the greatest.

4.1 G.V.R.D. AIR EMISSION PERMIT FOR THE BURRARD THERMAL GENERATING PLANT

Although the Burrard Thermal Generating Plant has been in operation since 1962, the related air emissions have only been regulated through a G.V.R.D. Air Emission Permit since 1985.

The current G.V.R.D. Air Emission Permit VA-330 does provide for specific emissions from the Plant's six power boilers and other auxiliary equipment. It further includes plant monitoring requirements, production capacity limits, and supplementary curtailments of the plant's operation during poor ambient air quality conditions.

However, recent information from the G.V.R.D. indicates that five of the six boilers at the Plant have inadequate pollution control equipment. Furthermore, the sixth boiler has a flue gas recirculation system only as pollution control equipment.

B.C. Hydro and Power Authority has been studying the costs and benefits of installing modern pollution control equipment at Burrard Thermal for several years. Studies completed by B.C. Hydro and Power Authority in 1989 and confirmed by an Environment Canada and G.V.R.D. study indicate that modern pollution control equipment could reduce emission of oxides of nitrogen at the Burrard Thermal Plant from the present 70 parts per million (p.p.m.) to less than 15 p.p.m.

The current G.V.R.D. Permit VA-330 for the Burrard Thermal Plant expires on 1992 April. It is staff's recommendation that G.V.R.D. direct further stringent air emission requirements upon renewal of the subject Permit.

4.2 AIR EMISSION IMPACTS DUE TO PROPOSED INCREASE IN THE OPERATION OF THE BURRARD THERMAL GENERATING PLANT

According to the G.V.R.D. officials, the proposal by B.C. Hydro and Power Authority will double the emissions of oxides of nitrogen from the Burrard Thermal Generating Plant, and therefore result in an increase of the subject contaminant in the Lower Fraser Valley.

This is in direct conflict with the Canadian Council Ministers of Environment (CAME) "Management Plan for Oxides of Nitrogen and Volatile Organics" endorsed by Canada's Green Plan, which calls for a 40% reduction in oxides of nitrogen emissions, and the G.V.R.D. Board of Director's goal of reducing the oxides of nitrogen emission by 50%.

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5.0 CONCLUSION

B.C. Hydro and Power Authority and its subsidiary B.C. Power Exchange Corporation, have applied to the B.C. Ministry of Energy, Mines and Petroleum, and the National Energy Board for renewal of Provincial Energy Removal Certificate and Federal Export Permit. The purpose of the application is to allow for the removal of electricity to the United States and Alberta on a short term basis for a period of six years beginning from 1991 October 01 to 1997 September 07. The application makes no allowance for the environmental impacts associated with burning of fossil fuels in the Lower Fraser Valley.

The G.V.R.D. has filed an intervention with B.C. Utilities Commission regarding the renewal application which will result in increased operation of the Burrard Thermal Generating Plant and a resultant doubling of emissions of oxides of nitrogen from the Plant. Furthermore, the pollution control equipment at the Burrard Thermal Generating Plant is inadequate and requires to be upgraded.

The proposal by B.C. Hydro and Power Authority will increase emissions of oxides of nitrogen in the Lower Fraser Valley. This is in direct conflict with the Canadian Council Ministers of Environment "Management Plan for Oxides of Nitrogen and Volatile Organics" endorsed by Canada's Green Plan, which calls for a 40% reduction in oxides of nitrogen emissions, and the G.V.R.D Board of Director's goal of reducing the oxides of nitrogen emission by 50%. Since this application is in direct conflict with both national and regional objectives, and the energy to be produced at Burrard Thermal is not required for domestic use, it is staff's recommendation that Council support filing of an intervention with B.C.U.C. on the subject issue. Staff would further recommend that G.V.R.D. direct further stringent air emission requirements upon renewal of G.V.R.D. Air Emission Permit VA-330 expiring on 1992 April for the Burrard Thermal Generating Plant.

DD/KCJ/js

cc: Medical Health Officer
Director Administrative &
Community Services

D. Dattani

A.K.C. Johnston, C.P.H.I.(C)
ACTING CHIEF PUBLIC HEALTH INSPECTOR