



Corporate NO: R031

Report COUNCIL DATE: February 14, 2000_

REGULAR COUNCIL

TO: Mayor & Council **DATE: February 8, 2000**

FROM: Manager, Utilities **FILE: 0065-012**
Engineering Department **1156-001**

SUBJECT: Reliability of B.C. Hydro Power Supply and Actions Taken by the City

RECOMMENDATIONS

1. That this report be received for information.
2. That Council request B.C. Hydro to place a high priority on implementing measures to reduce the number and severity of power outages in Surrey.

INTENT

To inform Council of actions underway by the City to deal with the impact of power failures on the City's utilities and other actions taken by the City to reduce the potential for power outages.

BACKGROUND

Last year, Council received a delegation from B.C. Hydro which dealt with a number of issues, the primary importance to the City of which was power outages. The majority of these power outages occur due to wind storms. The winter of 1998/1999 had the highest number of wind storms for many years, with a consequent high rate of power outages. South Surrey, because of its exposure to the ocean, is particularly impacted by wind storms and power outages.

Impact on City Utilities

The primary concern with power outages on the City's utilities is that the sewer, water and drainage pump stations would not operate. To overcome this concern, the City has been incrementally installing back-up power generators at its sanitary sewer pump stations. Sanitary sewer pump stations in the most

environmentally sensitive areas or where spillages could cause the greatest downstream problems are being targetted first. Lowland drainage pump stations, where the impact of a power outage is less critical, are incrementally being upgraded to have the ability to take back-up power from mobile generators. Central water pump stations, because of their high power needs, are the most difficult and expensive facilities to provide with back-up power. Additionally, as most wind storms occur in the winter when water pressures from the GVWD are higher, the risk of lack of water pressure for fighting fires is relatively small. Nevertheless, this risk still does exist.

As part of the City's preparations for the 1999 potential Fraser River Flood, the City purchased four large generators to provide emergency power for City purposes. The City was fortunate in acquiring these large generators at very competitive rates. These generators are now available for use as mobile generators or being installed for fixed use.

We are consequently proposing to utilize one generator at the Sunnyside water pump station and one at the Whalley water pump station. The cost to install and connect these two generators is in the order of \$100,000 and is included in the base water budget. The installation of these generators will substantially reduce the probability of power outages causing a failure of the water system to provide fire flows. The remaining two large generators will remain mobile to provide back-up power where needed to drainage pump stations, or as required for other emergency situations in the City.

Other City Actions

In addition to the actions taken to safeguard the City's utilities, the City is taking the following actions to help reduce the potential for wind induced power outages. These actions are as follows:

- requiring all new hydro lines for new subdivisions and developments be installed underground;
- progressively undergrounding of overhead hydro lines in the City Centre as part of the streetscape beautification program;
- reviewing the types of trees planted on City streets to reduce future interference with power lines.

Further to these actions, it is suggested that B.C. Hydro be requested to place a high priority on implementing measures, such as additional redundancy of supply, to reduce the number and severity of power outages in Surrey.

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