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# BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

THIRTEENTH ANNUAL REPORT  
Year ended 31 March 1975

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THE GOVERNMENT OF  
THE PROVINCE OF BRITISH COLUMBIA

MINISTER OF LANDS, FORESTS AND WATER RESOURCES

VICTORIA  
BRITISH COLUMBIA  
CANADA

26 June 1975

The Honourable Walter S. Owen, Q.C., LL.D.,  
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present the  
Annual Report of British Columbia Hydro and Power Authority  
for the year ended 31 March 1975.

Robert Williams

## BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

Head Office: 970 Burrard Street, Vancouver, British Columbia, Canada, V6Z 1Y3

### DIRECTORS AND OFFICERS

DAVID CASS-BEGGS *Chairman*  
THE HONOURABLE JAMES G. LORIMER  
JAMES H. RHODES  
JOHN H. STEEDE  
THE HONOURABLE ROBERT A. WILLIAMS  
JAMES W. WILSON

WILLIAM D. MITCHELL *Secretary*  
ELIZABETH B. FULWELL *Associate Secretary*

J. NORMAN OLSEN *General Manager*

### AUDITORS BANKERS REGISTRARS

PRICE WATERHOUSE & CO.  
CANADIAN IMPERIAL BANK OF COMMERCE  
*Securities issued by British Columbia Hydro and Power Authority:*  
*Canadian issues:* B.C. HYDRO  
*United States issues:* THE CANADIAN BANK OF COMMERCE TRUST  
COMPANY, New York  
*Securities issued by the former British Columbia Electric Company Limited:*  
*Callable Bonds:* MONTREAL TRUST COMPANY  
*First Mortgage Bonds:* MONTREAL TRUST COMPANY  
*Debentures:* THE ROYAL TRUST COMPANY  
*Securities issued by the former British Columbia Power Commission:*  
B.C. HYDRO

## THE BUSINESS OF B.C. HYDRO AND THE AREAS SERVED

### Electric Service

Generation and transmission of electricity.

Distribution of electricity throughout areas of British Columbia containing more than 90% of the population of the Province.

### Gas Service

Distribution of natural gas in Greater Vancouver and the Fraser Valley.

Distribution of liquid petroleum gas-air in Greater Victoria.

### Passenger Transportation Service

Urban bus service in Greater Vancouver and Greater Victoria.

Interurban bus service in Greater Vancouver, in the Fraser Valley, between Vancouver and Victoria and between Vancouver and Nanaimo.

### Rail Freight Service

Rail freight operations in Greater Vancouver and the Fraser Valley.

# BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

OFFICE OF THE CHAIRMAN

970 BURRARD STREET

VANCOUVER, B. C.  
V6Z 1Y3

25 June 1975

The Honourable R.A. Williams,  
Minister of Lands, Forests and Water Resources,  
Parliament Buildings,  
Victoria, British Columbia.

Dear Sir:

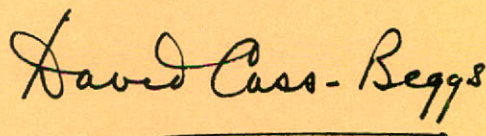
I have pleasure in presenting the Annual Report of British Columbia Hydro and Power Authority for the year ended 31 March 1975.

This has been a year of stabilization for B.C. Hydro following the major re-organization undertaken last year. It has also been a year of changing emphasis as we listen and attempt to respond to the needs and desires of people in various communities throughout the Province. Increasing concern by both the public and ourselves with respect to the environmental impact of our projects has led to the development of new policies aimed at involving the public in the early stages of project planning. This enables us to consider the public's concern before plans reach the advanced, inflexible stages.

Economic conditions have had a major effect on B.C. Hydro's operations as rising costs and interest rates have reduced our net income to \$3,349,543. The high interest rates coincided with B.C. Hydro's entry into the open market for financing for the first time since 1967. I am pleased to report that our bond issues were well received, reflecting the confidence of investors in B.C. Hydro. The proceeds of these bond issues were used for our capital expenditure program which this year amounted to \$463,821,122.

It is a pleasure to express on behalf of members of the Board their appreciation of the loyal and effective work of B.C. Hydro's employees during the year.

Respectfully submitted,



Chairman.

## THE YEAR IN BRIEF

- Gross revenues for the year were \$425,270,592, exceeding expenses by \$3,349,543.
- The rate of increase in electric and gas sales was the lowest since the formation of B.C. Hydro in 1962. Kilowatt-hours of electricity sold in British Columbia were only 3.9% higher than last year, and therms of gas sold increased 2.8%.
- The number of passengers carried by the urban transportation services increased 10.3% over last year.
- Expenditures on new plant amounted to \$463,821,122 compared with \$332,306,762 for the previous year.
- B.C. Hydro announced in July 1974 that increases would be made to electric rates for all categories of customers.

### B.C. HYDRO'S REVENUE DOLLAR

for the year ended 31 March 1975

#### WHERE THE REVENUE CAME FROM

ELECTRIC .....	70¢
GAS .....	18¢
PASSENGER TRANSPORTATION .....	7¢
RAIL FREIGHT .....	3¢
MISCELLANEOUS .....	2¢



#### HOW THE REVENUE WAS USED

EMPLOYMENT COSTS .....	28¢
MATERIALS AND SERVICES .....	21¢
GRANTS, SCHOOL TAXES & WATER RENTALS ..	7¢
INTEREST ON DEBT* .....	28¢
DEPRECIATION .....	15¢
RETAINED IN THE BUSINESS .....	1¢



\*less interest charged to construction.

# ANNUAL REPORT OF BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

for the year ended 31 March 1975

## RESULTS OF OPERATIONS

Net income for the year under review, after providing for all expenses, was \$3,349,543 compared with \$14,280,787 for the previous year. The net income was added to earnings retained in the business, and the corresponding funds were used for plant renewals and expansion to meet load growth.

Gross revenues for the year amounted to \$425,270,592, an increase of \$49,046,523 or 13.0% over the previous year.

The following table shows the principal sources of revenue and how this revenue was used:

	Year Ended 31 March 1975	Year Ended 31 March 1974
<b>Where the revenue came from:</b>		
Sale of electricity . . . . .	\$296,779,753	\$267,972,911
Sale of gas . . . . .	77,604,244	60,734,507
Passenger transportation . . . . .	30,483,081	27,727,847
Rail freight operations . . . . .	13,105,336	12,071,983
Interest on temporary investments . . . . .	2,380,680	4,122,010
Miscellaneous . . . . .	4,917,498	3,594,811
	<u>\$425,270,592</u>	<u>\$376,224,069</u>
 <b>How the revenue was used:</b>		
Salaries, wages and employee benefits . . . . .	\$117,882,333	\$ 88,455,245
Materials and services . . . . .	88,065,945	76,028,080
Grants, school taxes and water rentals . . . . .	28,830,420	25,039,270
Interest on debt, less interest on projects under construction . . . . .	121,382,409	110,740,440
Depreciation of plant . . . . .	65,759,942	61,680,247
Retained in the business . . . . .	3,349,543	14,280,787
	<u>\$425,270,592</u>	<u>\$376,224,069</u>

## ELECTRIC SERVICE

### Sales of Electricity

Sales of kilowatt-hours of electricity in British Columbia by B.C. Hydro increased by only 3.9% over the previous year. This modest increase, in sharp contrast to the 10.7% rate of growth for the year ended 31 March 1974, is the lowest rate of increase since the formation of B.C. Hydro, reflecting the economic slowdown currently being experienced in North America. The effect of the slowdown was reflected in B.C. Hydro's sales to customers at transmission voltages, where for the first time in the last decade, these bulk sales did not increase over the previous year.

Gross revenues from the electric service were \$296,779,753, up 10.7% from the previous year. The percentage increase in gross revenues compared with the relatively smaller increase in kilowatt-hours sold resulted principally from adjustments in electric rates that became effective during the year.

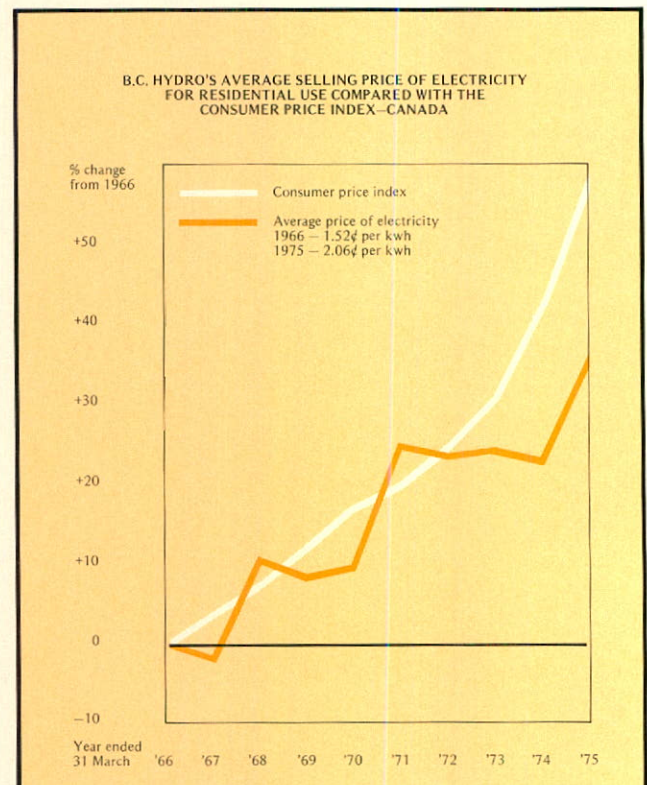
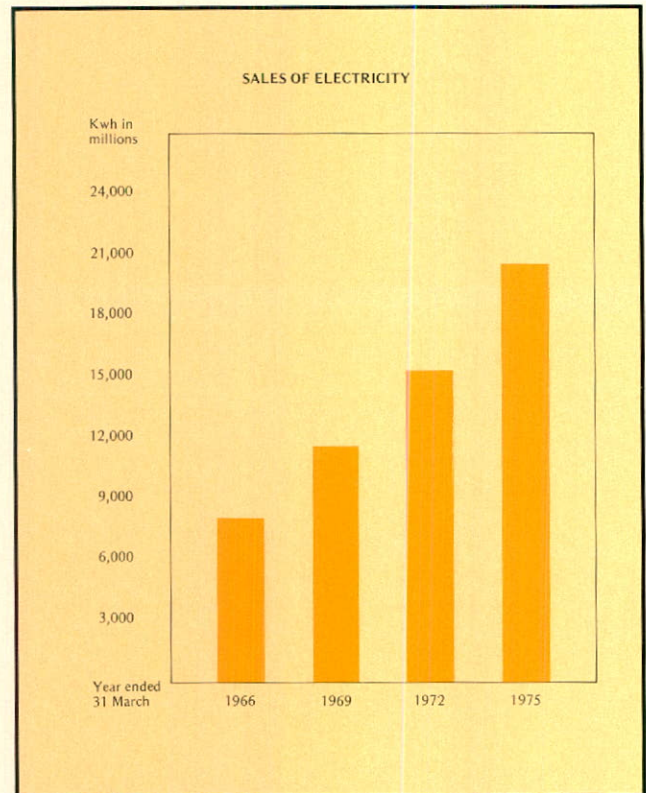
The following table shows kilowatt-hour sales in British Columbia and percentage changes from the previous year, by categories:

	Year Ended 31 March 1975 Kwh in Millions	% Increase (Decrease) from Previous Year
Residential	5,781	9.5
General	7,007	5.1
Bulk	7,714	(.8)
Other systems	176	(.5)
	<u>20,678</u>	<u>3.9</u>

B.C. Hydro was serving 842,954 customers with electricity at 31 March 1975, an increase of 41,686 during the year. Average annual consumption per residential customer rose from 7,694 kwh to 7,928 kwh.

### Electric Rates

In July 1974, B.C. Hydro announced that electric rates would be increased for all categories of customers. Residential rate increases of up to 20% became effective 1 August 1974; rates for large industrial customers will be increased by about 50% to 55% in two stages effective 1 August 1975 and 1 April 1976, and bulk power rates will be increased about 70% effective 1 August 1976. Rate increases averaging 18% were approved for the remaining non-residential customers effective 31 December 1974.





## Rural Electrification

During the year ended 31 March 1975, the Government of British Columbia continued its annual grant of \$3,000,000 to B.C. Hydro to provide financial assistance for the electrification of rural areas in British Columbia. As a result of this grant, commitments were made to extend financial help to 179 projects serving 1,004 customers in various areas of the Province. Projects approved included extensions at Inverness Passage, near Prince Rupert; Tlell, in the Queen Charlotte Islands; and East Egmont, on the Sechelt Peninsula. Other projects approved were the installation of diesel generating units and construction of distribution systems to serve the communities of Telegraph Creek, Dease Lake and Eddontenajon in the northwestern part of the Province.

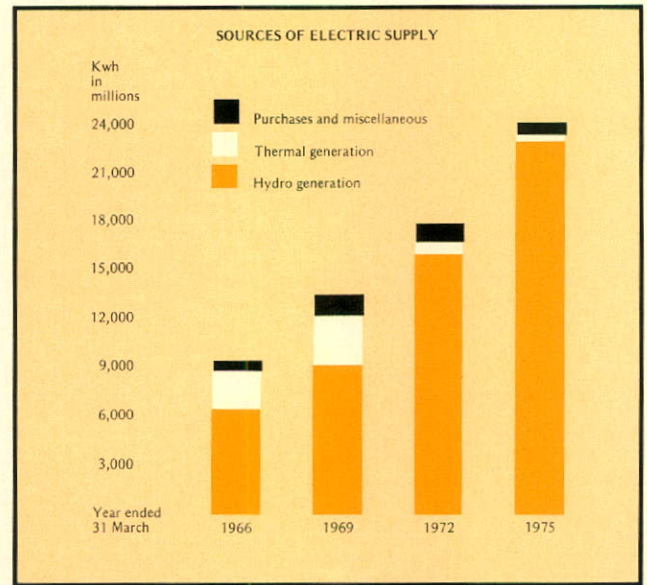
## Generation and Supply of Electricity

Demand for electricity during the year totalled 24,202 million kwh. The following table shows requirements for energy and sources of supply for the year under review:

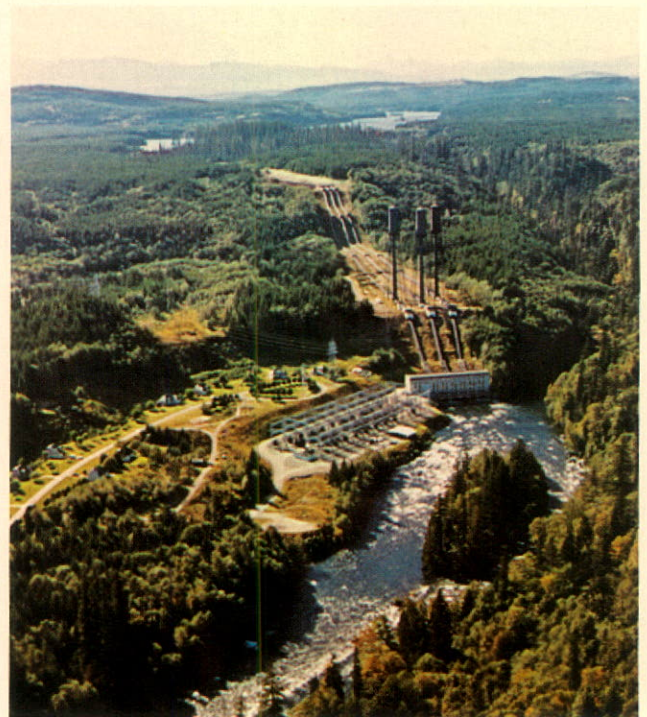
	Kwh in Millions	% of Total
<b>Requirements for energy:</b>		
Sales to customers	20,678	85.4
Export	818	3.4
Line loss and system usage	2,706	11.2
	<u>24,202</u>	<u>100.0</u>
<b>Sources of supply:</b>		
Hydro generation —		
Peace River Project	15,622	64.5
Other	7,527	31.1
Thermal generation	256	1.1
Purchases and miscellaneous	797	3.3
	<u>24,202</u>	<u>100.0</u>

As the above table illustrates, nearly all the electricity delivered during the year was from hydro plants, the most pollution-free source of electric energy. Approximately 65% of the energy was produced at Gordon M. Shrum Generating Station on the Peace River.

The seasonal run-off in the Columbia River Basin in the United States was above average during the year; consequently, the power shortage in the northwestern United States was not as severe as in the previous year. As a result, B.C. Hydro's exports of surplus power declined from the 8.3% of total energy requirements recorded last year to 3.3%.



The installed nameplate generating capacity of the B.C. Hydro system at 31 March 1975 totalled 4,722,476 kw, up 7.8% from the previous year. The highest one-hour demand ever recorded on the integrated system, 3,791,000 kw, occurred on 27 January 1975. This represented an increase of 6% over the previous one-hour peak, which occurred in January 1974.



Most of B.C. Hydro's power is generated by hydroelectric plants such as the John Hart station on Vancouver Island.

## GAS SERVICE

Gross revenues from the sale of gas to the public were \$77,604,244, an increase of 27.8% from the previous year. The increase resulted principally from rate increases that became effective 1 March 1974, as therms of gas sold increased by only 2.8% over the previous year. The weather, which has a marked influence on the sale of gas for heating, was milder than the previous year.

The following table shows therms sold to the public and percentage changes from the previous year, by categories:

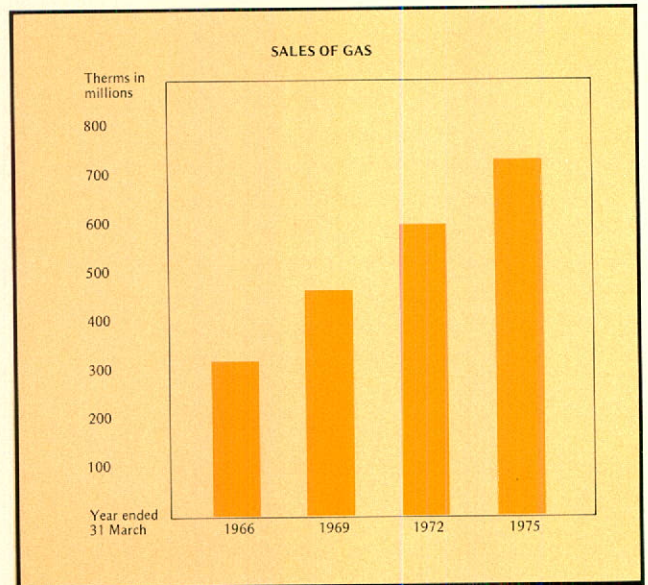
	Year Ended 31 March 1975 Therms in Millions	% Increase (Decrease) from Previous Year
Residential	279.6	3.9
General	241.0	5.1
Interruptible	210.5	(1.2)
	<u>731.1</u>	2.8

The peak one-day output of gas in the Lower Mainland, excluding interruptible loads and gas delivered to Burrard Thermal Generating Plant, was 3.4 million therms on 10 January 1975. This was 7.8% higher than the previous year's peak of 3.1 million therms and equalled the record peak established in December 1972.

In the Lower Mainland, natural gas was chosen to heat 5,346 new apartment suites, 726 new commercial buildings and 7,033 new houses.

Other significant developments during the year included the following:

- a net increase of 126 miles of gas mains, bringing the cumulative total to 4,239 miles of mains in service;
- major reinforcements to the distribution system to meet continuing increases in load;
- acquisition of portable liquid natural gas supply units for temporary or emergency service;
- completion of a 4½-mile, 24-inch transmission pipeline loop in Richmond and the virtual completion of one of two 24-inch pipeline crossings of the Fraser River.



B.C. Hydro participated in a hearing called by the National Energy Board to investigate the supply and demand of natural gas in Canada as a preliminary to establishing a national export policy.

Problems experienced by producers in northern British Columbia resulted in severe curtailment of gas available for export to the United States. To offset part of the shortage, B.C. Hydro voluntarily switched Burrard Thermal Generating Plant from gas to oil, thereby making 50 million cubic feet of gas per day available. The additional cost of using oil at the Burrard plant was borne by British Columbia Petroleum Corporation.



*Gas transmission pipeline loop was completed in Richmond.*

## TRANSPORTATION SERVICES

### Urban Transportation

Gross revenues from urban transportation services amounted to \$21,209,067, up 9.9% from the previous year. In addition, the Government of British Columbia again made a grant of \$2,000,000 to B.C. Hydro to reduce losses on the urban transit services, and through the Bureau of Transit Services, directed the planning of the transportation system. Passengers carried increased by 10.3% over the previous year to a total of 94.3 million; the increase in riding was particularly noticeable in the suburban areas and during the peak commuter travel hours. In spite of the increased patronage, losses on the urban transit services continued to climb.

Expansion of service continued during the year, contributing to an increase in miles operated of 4,039,719 or 17.1%. A significant change in transit operations occurred during the year when the Granville Mall in downtown Vancouver was constructed. During the construction period, all traffic was rerouted for several months. Upon completion of the Mall, buses returned to their normal routes and now share the Mall with pedestrians and limited vehicular traffic.

During the year, a total of 105 new buses were placed in service; these buses were purchased by the Bureau of Transit Services for use by B.C. Hydro. In cooperation with the Bureau of Transit Services, B.C. Hydro demonstrated European-style articulated buses on an experimental basis in the Greater Vancouver area. These buses, the first of their type to be tried in Canada, were evaluated thoroughly by both operating and maintenance staff; the results of the evaluations have encouraged the Bureau of

Transit Services to include articulated buses in plans for the future.

As the bus fleet increases, a strain is placed on maintenance facilities; to overcome this problem, a program of expansion of these facilities has been undertaken. Two garages are being expanded, a temporary facility has been opened in downtown Vancouver and a large transit centre is under construction in the Municipality of Surrey. The Surrey location will provide operating and maintenance facilities for a fleet of 250 buses for new transit services throughout Surrey, Richmond and Delta.

B.C. Hydro continued a policy of recent years by again providing free transportation to senior citizens for three days during the Christmas shopping period. In addition, buses were made available for three evenings during the same period for free Christmas lighting tours for approximately 5,000 senior citizens. On New Year's Eve, free transportation was provided to all passengers from 8:00 p.m. until the last scheduled run.

### Interurban Transportation (Pacific Stage Lines)

Gross revenues from interurban bus services rose 13.1% to \$7,274,014 during the year, and the number of passengers increased 4.3% from the previous year. These increases can be attributed mainly to the increasing popularity of the Vancouver — Victoria and Vancouver — Nanaimo services, which make the crossing to Vancouver Island via ships of the British Columbia Ferry Authority. Gains in revenue were also recorded in the sightseeing and charter services.



*Articulated transit buses showed promise in trial runs.*



*Buses share Vancouver's Granville Mall with pedestrians.*

## Rail Freight

Gross revenues from rail freight operations amounted to \$13,105,336, an increase of 8.6% over the previous year, while volume of freight handled was 2,748,879 tons, down 1.8%.

A new 2,000-horsepower diesel locomotive was received in September 1974, bringing the total diesel locomotive fleet to twenty-one units. Orders have been placed for three 1,500-horsepower diesel locomotives, with delivery expected in late 1975.

On 31 May 1974, the arrangement under which British Columbia Railway Company had assumed general responsibility for managing B.C. Hydro's rail freight service was discontinued, and B.C. Hydro resumed this responsibility.

## COST OF PROVIDING SERVICES

The total cost of providing all services during the year was \$421,921,049, an increase of \$59,977,767 or 16.6% over the previous year.

Salaries, wages and employee benefits charged to operations amounted to \$117,882,333, up \$29,427,088 or 33.3% over the previous year. This increase reflects higher rates of pay, an increase in the number of regular employees and a supplement in pensions to retired employees to ease the impact of inflation.

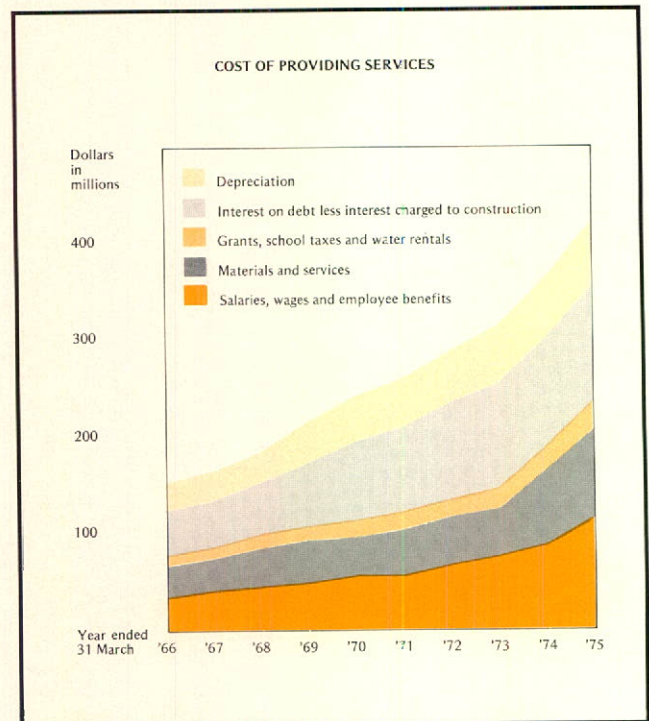
Grants, school taxes and water rentals charged to operations totalled \$28,830,420, an increase of \$3,791,150 or 15.1% over the previous year. Water rentals increased \$1,150,534 or 32.3%, because of higher fees and increased production of electricity. Increases in grants and school taxes were caused mainly by additions of property and generally higher assessments on property.

Interest and other costs on debt charged to operations during the year were \$121,382,409, up \$10,641,969 or 9.6% over the previous year. The increase reflects higher rates of interest on borrowings and the transfer to active service of new plant. Provision for depreciation of plant, also directly related to plant in service, totalled \$65,759,942, up \$4,079,695 or 6.6% over the previous year.

Purchases of natural gas from Westcoast Transmission Company Limited totalled \$46,263,643, of which \$45,031,800 was for gas sold to the public — an increase of 31.1% over the previous year, reflecting a full year of the higher price of natural gas that became effective 14 November 1973. The remainder of the gas purchased was used principally at Burrard Thermal Generating Plant.



*Total of diesel locomotives in B.C. Hydro's railway fleet rose to 21 with acquisition of a new 2,000-horsepower unit. Three more units were ordered for delivery in late 1975.*



## FINANCING

During the year ended 31 March 1975, B.C. Hydro sold \$508,609,000 of bonds, as follows:

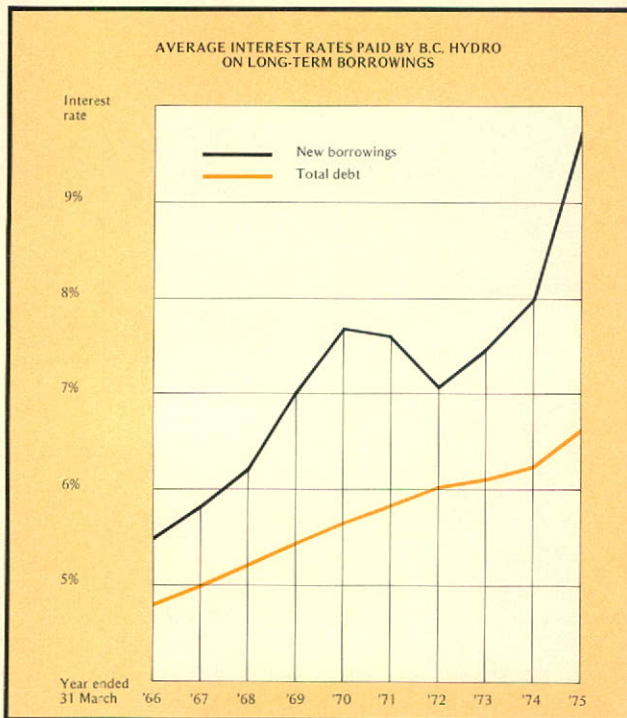
Canada Pension Plan Investment Fund	\$ 66,609,000
Provincial Government trust funds	67,000,000
Private placements	200,000,000
Public issues - in the United States	100,000,000 U.S.
- in Canada	75,000,000

The average effective annual interest cost of all long-term bonds sold by B.C. Hydro during the year was 9.71% compared with an average of 8.00% for the previous year.

On 1 September 1974, \$25,000,000 8½% Parity Development Bonds Series DP, due 1 September 1979, were sold. The net proceeds of this issue were applied to the repayment of \$25,000,000 7% Parity Development Bonds Series AZ, which matured 1 September 1974. At the same time, the interest rate on all other outstanding Parity Development Bonds was increased to 8½%. Parity Development Bonds outstanding at 31 March 1975 amounted to \$100,000,000, a reduction of \$38,010,000 from the amount outstanding at the previous year-end.

During the year, \$23,588,018 was paid to Trustees to meet sinking fund requirements of long-term debt. All sinking fund obligations have been met.

Bonds and other securities issued by B.C. Hydro and its predecessors are unconditionally guaranteed as to principal and interest by the Province of British Columbia.



## LITIGATION

A lawsuit was started on 17 July 1967 in the Supreme Court of British Columbia by the contractors constructing the underground powerhouse and associated works at Gordon M. Shrum Generating Station, alleging breach of contract. Amounts between \$20 million and \$30 million were claimed as damages. During the trial, the contractors introduced an alternative claim to which they gave priority for the total cost to them of the construction work, including interest and profit, and a balance owing of \$51 million was claimed. The alternative claim has been tried, and judgment has been delivered declaring the contractors to be entitled to compensation on the basis of quantum meruit. No assessment has been made by the Court of the amount of such compensation. In further Reasons for Judgment, dated 28 February 1975, the Trial Judge directed that compensation to the contractors based on quantum meruit be determined prior to either party appealing the judgment; proceedings resumed for this purpose on 14 April 1975.

## CONSTRUCTION PROGRAM

Expenditures on plant additions, land and improvements totalled \$463,821,122 compared with \$332,306,762 for the previous year. Net property additions were \$452,143,767 after deducting plant retirements of \$11,677,355. Expenditures on plant included an allocation of indirect costs of administration, engineering and supervision; and interest on plant under construction, at rates equivalent to the cost of borrowing funds.

Plant expenditures for the year, by service and in broad categories, were as follows:

Electric service	
Generation	
Hydro	
Mica generating plant	\$99,187,128
Kootenay Canal project	48,180,103
Other	34,970,745
Thermal	20,044,454
Transmission	
500 kv	59,041,527
Other	21,801,138
Transformation	44,840,915
Distribution	58,674,222
Other electric plant	22,909,424
Gas service	24,729,488
Transportation services	8,185,396
General	21,256,582

## Major Electric Service Plant Additions

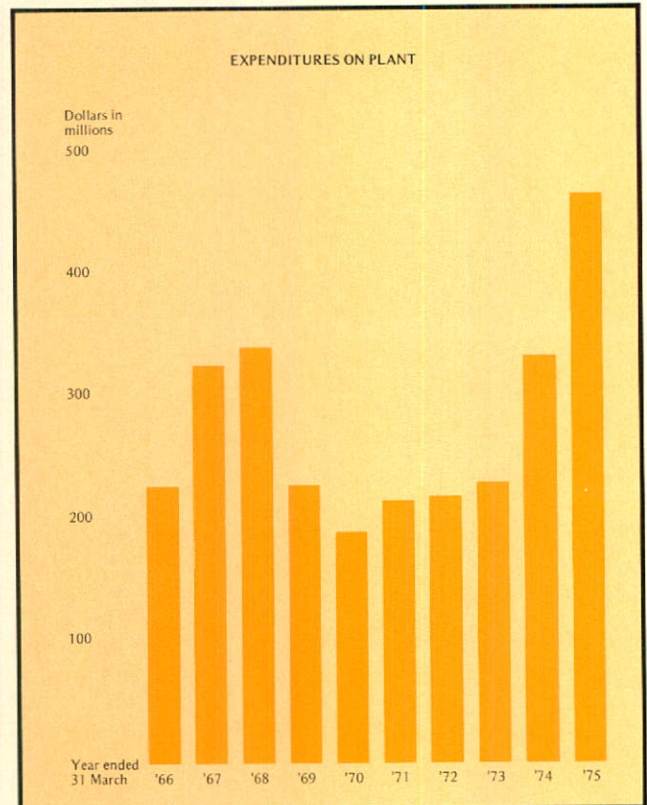
Construction of the Kootenay Canal hydroelectric project continued on schedule. The project includes a three-mile-long canal and an aboveground powerhouse with four 125,000 kw generating units. The concrete work for the canal, canal headworks and penstock intakes was essentially completed. In the completed powerhouse, installation of the four units is progressing satisfactorily. The first two units are scheduled for service in 1975, and the other two in 1976. Construction of the switchyard, installation of associated control and relay equipment and construction of the transmission lines for this project are on schedule. The 230 kv line to Nelway Substation and the 60 kv tie to the South Slocan Station of the West Kootenay Power and Light Company, Limited are to be completed in 1975, and the 500 kv line to Ashton Creek Substation will be completed for initial operation at 230 kv in 1976.

McNaughton Lake, behind Mica Dam, is now storing water for future generation as well as fulfilling operating commitments under the Columbia River Treaty. At the Mica project, construction of the underground powerhouse and other features is essentially on schedule. Installation of the first four 400,000 kw units was commenced in January 1975, and manufacture of mechanical and electrical equipment was continued. The first two units are scheduled for service in 1976, and the third and fourth units for 1977. The 500 kv switching equipment for Mica will be compressed gas insulated, which because of its smaller size and complete enclosure, will be installed indoors, thereby overcoming problems caused by snow. Construction of the two 500 kv lines from Mica to the Lower Mainland is proceeding on schedule; the first line from Nicola to Ingledow Substation will be completed in 1975, and from Mica to Nicola in 1976; the second line will be completed in 1977.

Installation of the ninth generating unit at Gordon M. Shrum Generating Station was completed in 1974, and the unit became operational at the end of September. The addition of this unit, with a nameplate rating of 300,000 kw, brings the total station capacity to 2,116,000 kw. Present plans are to install a tenth unit when required. The capacity of the Peace River transmission system has been increased by the expansion of series capacitor stations at Kennedy, McLeese, Chapmans and Creekside. Kennedy Station is now one of the largest series capacitor stations in the world.

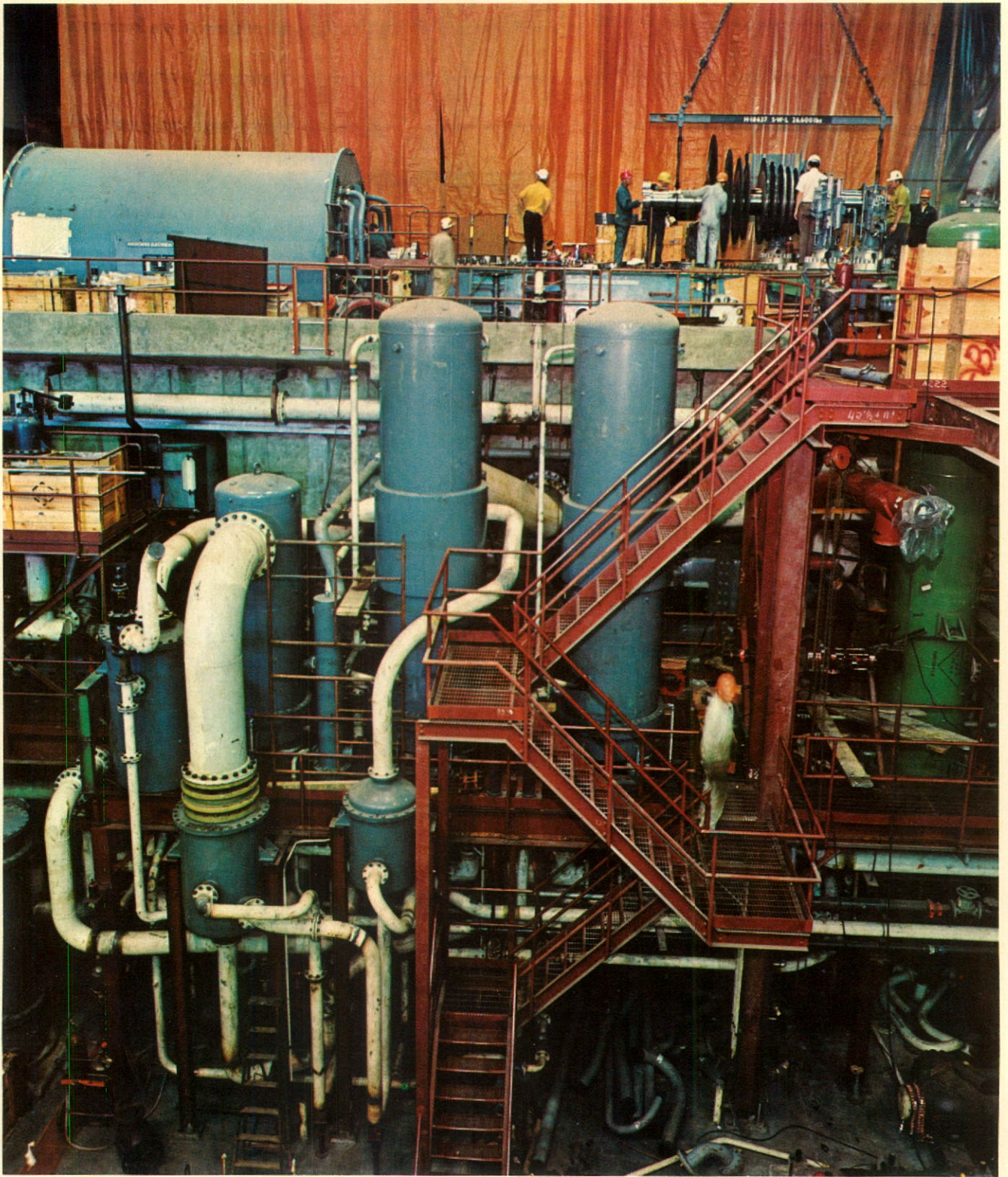
Contracts have been awarded for several major aspects of the Site One project. This project, situated on the Peace River about 14 miles downstream from the W.A.C. Bennett Dam, will consist of a concrete dam with four 175,000 kw units in a surface powerhouse. The first two units are scheduled for service in 1979, with the other two units to follow in 1980.

At the Seven Mile project on the Pend-d'Oreille River, construction of the site camp is in progress. Tenders have been received for the turbines and generators, for construction of the diversion tunnel and related works and for the concrete batching plant. This project, when complete, will consist of a concrete dam and a surface powerhouse with a total capacity of 700,000 kw from four 175,000 kw units. The in-service date for the first three units is 1980.



At Burrard Thermal Generating Plant, final testing of the sixth unit will be completed by mid-1975, bringing this plant to its ultimate capacity of 900,000 kw.

Additional generating capacity was installed in other areas throughout the Province. At Prince Rupert, a second 28,619 kw gas turbine unit was installed to provide peaking capacity for the Skeena system and emergency standby for Prince Rupert and vicinity. Near Port Hardy on Vancouver Island, a 40,500 kw gas turbine unit became operational in 1974. This plant provides peaking capacity for Vancouver Island and standby power for the northern portion of the Island; installation of a 53,900 kw second unit is scheduled for 1975. In the non-integrated portion of the system, generating capacity was increased at Atlin, Bamfield, Blue River, Fort Nelson, McBride, Revelstoke, Stewart and Valemount.



*Workmen lower turbine rotor into place atop sixth unit at Burrard Thermal Generating Plant near Port Moody. Final testing of unit will be completed by mid-1975, bringing the plant to its ultimate generating capacity of 900,000 kw.*

Installation of additional high-voltage, direct-current equipment at Arnott and Vancouver Island Terminal Substations progressed on schedule. When placed in service in late 1976, these additions will increase the capacity of the high-voltage, direct-current interconnection to Vancouver Island from 312,000 kw to 537,000 kw.

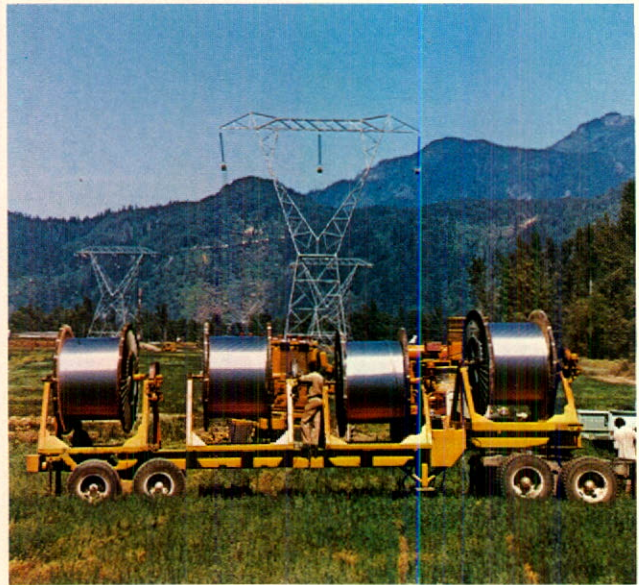
A second major 500 kv receiving station is being constructed near Port Coquitlam to serve the Greater Vancouver area. The first phase of this project will be connected to the Peace River transmission system in late 1975, and the second phase to the Mica system in 1976.

Substation capacity throughout the service area was increased by approximately 700,000 kva to ensure adequate supply of power.

In the central interior, construction of the 500 kv line west from Glenannan to Skeena is progressing on schedule. The seventy-mile section between Glenannan and Houston was completed and brought into service at 138 kv to improve service in the Houston and Smithers areas; the remainder of the line (101 miles) is scheduled to be completed in 1978.

Installation of 230 kv underground cables between Murrin and Horne-Payne Substations in the Lower Mainland was completed, and work is in progress for 230 kv cables between Goward and Horsey Substations on Vancouver Island. Near Kamloops, 138 kv cables are being installed across the Thompson River.

Engineering, environmental and socio-economic studies were continued on potential generation projects on the Peace and Columbia Rivers, on Vancouver Island and in the Hat Creek area. Detailed studies of coal deposits at Hat Creek are in progress. Consulting geologists conducted exploratory drilling programs on the existing coal licences at the north end of the Upper Hat Creek Valley, 15 miles west of Cache Creek, where proven and probable reserves of coal have been estimated to be approximately 500 million tons. In addition, coal licences covering the entire Upper Hat Creek Valley have been acquired, and drilling programs are proceeding on these licences. Geological and geophysical investigations of the Lillooet River Valley and surrounding region were undertaken to determine the potential for geothermal energy and to identify the areas of significant promise. Geophysical studies of the Meager Creek area and geological reconnaissance of the western part of Vancouver Island are currently in progress.



*Work continued on construction of two 500 kv transmission lines from Mica to the Lower Mainland. First line is scheduled for completion in 1976, second line a year later.*



*Giant penstocks will feed water to new Kootenay Canal generating plant when it begins operation later in 1975. Two 125,000 kw units at this hydroelectric project will be placed in service in 1975, remaining two in 1976.*



## ENVIRONMENT

Attention continues to be given to environmental matters, particularly with respect to transmission rights-of-way, where more selective and sensitive clearing and reclearing methods are being used.

In areas where removal of growth will not create soil instability, bulldozing or grubbing is still the preferred method of clearing. The areas are then restored as soon as possible by grooming with special equipment and seeding with grass or low-growing shrubbery. When rights-of-way are prepared this way, particularly when they are used for livestock grazing, little effort is required to control growth. On steep slopes, where grubbing could cause soil erosion, clearing is done by hand and regrowth is controlled by chemical herbicides. Where the use of chemicals is undesirable, rotary mowers are used; when machine methods are not possible, regrowth is controlled by hand slashing.

B.C. Hydro is aware of public and governmental concern about the use of herbicides and operates its brush control programs in consultation with appropriate Federal and Provincial government departments. Since mid-1973, herbicide applications have been reduced at the request of the Provincial Government, pending the report of a Royal Commission of Enquiry into the use of pesticides and herbicides in British Columbia.

To minimize the visual impact of transmission lines near populated areas, B.C. Hydro has adopted the following approaches where possible:

- (a) permitting controlled regrowth of desirable species;
- (b) planting shrubs and trees at road crossings;
- (c) leaving native growth during initial clearing;
- (d) encouraging agricultural, recreational and commercial use of rights-of-way;
- (e) creating park-like areas next to housing developments;
- (f) avoiding the placement of towers in prominent areas.

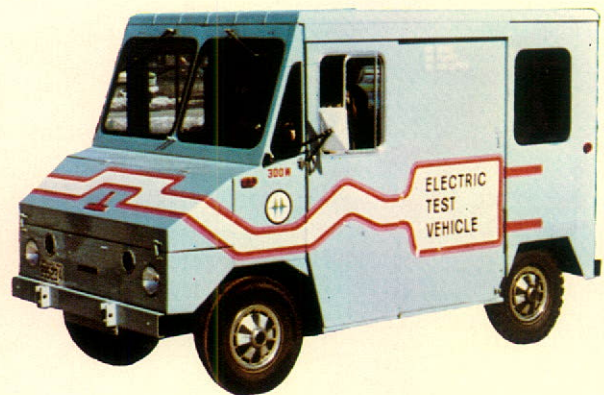
In designing substations, special attention is being given to the use of enclosed structures to reduce noise levels and present a more attractive appearance. During the year, a new indoor substation was completed at the John Lawson site in West Vancouver; this station was designed in consultation with architects and municipal planners. New low-profile substations were constructed during the year at Boston Bar and Clearwater.

B.C. Hydro is working closely with the Pollution Control Branch, the Water Resources Service Laboratories and British Columbia Health Division Laboratories in connection with the regulation of waste water effluents, plant drainage sumps, cooling water systems, sewage treatment facilities and exhaust gas emissions at major thermal generating stations.

During the year, B.C. Hydro's fuel storage and handling facilities at diesel generating plants were inspected by a petroleum engineering consultant. As a result, action is being taken to counteract possible spills of oil or hazardous chemicals.

At Port Mann Gas Turbine Generating Plant, a water injection system, designed and installed by B.C. Hydro staff, was placed in service on one unit. This system, which reduces nitrous oxide emissions, will be added to the other three units.

Programs for removal of debris were continued at various reservoirs, and the objective of optimum use of B.C. Hydro lands was further realized with the development of day-use recreational facilities at Buntzen Lake, near Vancouver. Studies are proceeding on development of recreational potential at Alouette, Daisy, Hayward, Lucille and Stave lakes in anticipation of increased public needs.



During the year, B.C. Hydro sponsored or participated in several programs designed to encourage efficient use of electricity and gas; these included an advertising campaign on television, radio and in newspapers and a study by the University of British Columbia of electric vehicles for commercial use. In August 1974, B.C. Hydro took delivery of an electric battery-powered van and has displayed this van at various sites throughout the Province.

The environmental needs and concerns of neighbouring communities are important considerations to B.C. Hydro in planning new facilities. Numerous meetings are held each year in communities throughout the Province with regional districts and municipalities, government departments, citizen groups and other interested members of the public. The purpose of such consultations is to open B.C. Hydro's major project planning to public discussion at an early stage so those communities, groups and individuals who may be affected by such projects have an opportunity to voice their concerns before planning is so far advanced as to be inflexible. During the year, meetings were held with respect to various generation and transmission projects.

## SENIOR APPOINTMENTS

On 15 September 1974, Mr. James H. Rhodes became a member of the Board of Directors of B.C. Hydro. Mr. Rhodes is Chairman and Chief Executive Officer of British Columbia Petroleum Corporation.

Effective 1 January 1975, Mr. William D. Mitchell was appointed Secretary of B.C. Hydro, replacing Mr. Geoffrey G. Woodward who retired on 31 December 1974. Mr. Woodward had served B.C. Hydro and its predecessor company, British Columbia Electric Company Limited, since 2 July 1947.

## PERSONNEL

Regular employees at 31 March 1975 totalled 10,361, an increase of 1,416 or 15.8% during the year. Despite active recruiting campaigns, considerable difficulty was experienced in hiring qualified engineers and linemen.

Collective agreements were concluded during the year, without work stoppages, with Amalgamated Transit Union (Pacific Stage Lines), Management and Professional Employees Society of B.C. Hydro, Office and Technical Employees' Union and the Registered Nurses' Association of British Columbia.

The settlement with the Office and Technical Employees' Union was achieved through an Industrial Enquiry Commission. The salary settlement provided a salary scale adjustment averaging 2.8% and a 14.5% general increase plus a cost of living adjustment in the first year. In the second year, a salary increase of 11% was provided, but the agreement contains a provision for the same Commission to make non-binding recommendations on the adequacy of this increase.

The services of a consultant were engaged to lead two joint B.C. Hydro/employee task forces in a major review of B.C. Hydro's job evaluation system and its administration. Findings and recommendations are expected in mid-1975. Also, B.C. Hydro launched a major review of employee benefit plans in order to provide more efficient coverage on a needs-oriented basis.

Mr. S.C. Burnell, Manager, Metropolitan Vancouver Division, died 6 June 1974. Mr. Burnell had served B.C. Hydro and its predecessor company, British Columbia Power Commission, since 15 April 1952.

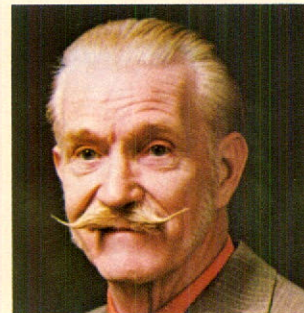
A total of 217 employees, including Mr. M.H. Fox, Manager, Industrial Relations and Personnel Division, retired on pension during the year. Fourteen of these employees had service of 40 years or more, and the following had served for more than 45 years:



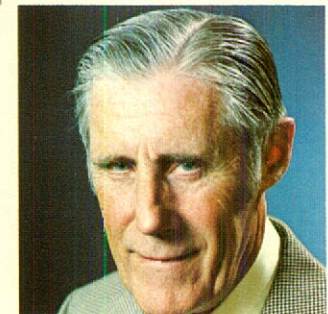
EDWARD A. McILWAIN  
*48 years, 2 months*



GORDON A.J. PAYTON  
*48 years*



GEORGE HALL  
*46 years, 9 months*



WILFRED F. SMITH  
*45 years, 5 months*

ERIC G. BEGG  
*48 years, 6 months*

DONALD R. WALLS  
*45 years, 4 months*

HAZEL B. MAINS  
*45 years, 3 months*

## FINANCIAL STATEMENTS

The financial statements of B.C. Hydro have been examined by Price Waterhouse & Co., the Auditors appointed by the Lieutenant-Governor in Council. The Report of the Auditors, Statement of Income, Statement of Earnings Retained in the Business, Balance Sheet, Statement of Source and Application of Funds and Statement of Long-Term Debt are included in the following pages.

## REPORT OF THE AUDITORS

The Lieutenant-Governor in Council,  
Province of British Columbia:

We have examined the balance sheet of British Columbia Hydro and Power Authority as at 31 March 1975, the statements of income, earnings retained in the business and source and application of funds for the year then ended and the statement of long-term debt as at 31 March 1975. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion these financial statements present fairly the financial position of British Columbia Hydro and Power Authority as at 31 March 1975 and the results of its operations and the source and application of its funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Vancouver, British Columbia  
27 May 1975

PRICE WATERHOUSE & CO.  
*Chartered Accountants*

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

STATEMENT OF INCOME  
FOR THE YEAR ENDED 31 MARCH 1975

	1975		1974	
Gross revenues . . . . .		<u>\$425,270,592</u>		<u>\$376,224,069</u>
Expenses:				
Salaries, wages and employee benefits . . . . .		117,882,333		88,455,245
Materials and services . . . . .		88,065,945		76,028,080
Grants, school taxes and water rentals . . . . .		28,830,420		25,039,270
Depreciation (Note 1) . . . . .		65,759,942		61,680,247
Interest on debt (Note 7) . . . . .	\$160,991,174		\$133,800,910	
Less —				
Interest charged to construction (Note 1)	<u>39,608,765</u>	<u>121,382,409</u>	<u>23,060,470</u>	<u>110,740,440</u>
		<u>421,921,049</u>		<u>361,943,282</u>
Net income . . . . .		<u>\$ 3,349,543</u>		<u>\$ 14,280,787</u>

STATEMENT OF EARNINGS RETAINED IN THE BUSINESS  
FOR THE YEAR ENDED 31 MARCH 1975

	1975	1974
Reserve for stabilization of rates:		
At beginning of year . . . . .	\$ 15,000,000	\$ 10,000,000
Allocated during year . . . . .	—	5,000,000
At end of year . . . . .	<u>15,000,000</u>	<u>15,000,000</u>
Other retained earnings:		
At beginning of year . . . . .	138,526,886	129,246,099
Net income . . . . .	3,349,543	14,280,787
	<u>141,876,429</u>	<u>143,526,886</u>
Allocated to reserve for stabilization of rates . . . . .	—	5,000,000
At end of year . . . . .	<u>141,876,429</u>	<u>138,526,886</u>
Earnings retained in the business at end of year . . . . .	<u>\$156,876,429</u>	<u>\$153,526,886</u>

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

STATEMENT OF SOURCE AND APPLICATION OF FUNDS  
FOR THE YEAR ENDED 31 MARCH 1975

	1975	1974
<b>Funds provided:</b>		
Operations—		
Net income . . . . .	\$ 3,349,543	\$ 14,280,787
Depreciation . . . . .	65,759,942	61,680,247
Income from sinking fund investments held by Trustee (Note 7) . . . . .	(10,810,479)	(9,032,129)
Other . . . . .	(287,795)	226,896
	<u>58,011,211</u>	<u>67,155,801</u>
Contributions in aid of construction . . . . .	11,943,232	9,192,741
Proceeds from sales of bonds . . . . .	528,174,571	262,857,441
Miscellaneous . . . . .	4,804,864	1,320,162
	<u>\$602,933,878</u>	<u>\$340,526,145</u>
<b>Funds expended:</b>		
Plant additions . . . . .	\$463,821,122	\$332,306,762
Sinking funds . . . . .	23,588,018	22,437,463
Bonds redeemed . . . . .	74,037,600	64,010,000
	<u>561,446,740</u>	<u>418,754,225</u>
Increase (decrease) in working capital exclusive of changes in current portion of long-term debt . . . . .	41,487,138	(78,228,080)
	<u>\$602,933,878</u>	<u>\$340,526,145</u>

*Certain 1974 figures have been reclassified for comparison with 1975.*

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

BALANCE SHEET AS AT 31 MARCH 1975

	1975	1974
PROPERTY ACCOUNT:		
Lands, franchises, water rights, storage dams, plants for the generation, transmission and distribution of electricity and gas, trolley coaches, motor buses, freight railway and rolling stock, etc., at cost . . . . .	\$3,254,465,246	\$3,002,283,549
Less—		
Accumulated depreciation . . . . .	634,125,592	568,666,120
	<u>2,620,339,654</u>	<u>2,433,617,429</u>
Deferred costs of dams, powerhouse and other common property (Note 1) . . . . .	150,429,460	185,167,502
Unfinished construction . . . . .	536,536,361	301,836,249
	<u>3,307,305,475</u>	<u>2,920,621,180</u>
CURRENT AND WORKING ASSETS:		
Cash . . . . .	3,844,772	440,163
Funds receivable from issue of bonds . . . . .	20,299,125	8,500,000
Temporary investments, at cost (Note 2) . . . . .	54,011,050	33,061,564
Bonds held for sinking funds, at cost. . . . .	2,813,038	3,135,225
Accounts receivable and unbilled revenues . . . . .	94,185,535	64,938,912
Materials and supplies, at cost . . . . .	42,579,364	22,177,064
Prepaid expenses . . . . .	2,409,389	1,432,385
	<u>220,142,273</u>	<u>133,685,313</u>
MORTGAGES AND OTHER DEFERRED ACCOUNTS RECEIVABLE . . . . .	5,033,362	4,390,881
INSURANCE FUND (Note 3) . . . . .	4,457,301	3,371,737
UNAMORTIZED DISCOUNT AND EXPENSE ON DEBT (Note 1) . . . . .	19,146,769	16,393,516
	<u>\$3,556,085,180</u>	<u>\$3,078,462,627</u>

ON BEHALF OF THE BOARD:

*David Cass-Beggs*

DAVID CASS-BEGGS, Director

*J.H. Steede*

J.H. STEEDE, Director

	1975	1974
LONG-TERM DEBT, per statement (Note 4) . . . . .	\$2,514,667,304	\$2,055,101,732
PARITY DEVELOPMENT BONDS, payable on demand (Notes 4 and 7):		
7% Series AZ due 1 September 1974 . . . . .	—	43,505,000
8½% Series CG due 1 September 1975 . . . . .	25,000,000	44,505,000
8½% Series CS due 15 August 1977 . . . . .	25,000,000	25,000,000
8½% Series CY due 3 August 1978 . . . . .	25,000,000	25,000,000
8½% Series DP due 1 September 1979 . . . . .	25,000,000	—
	<u>100,000,000</u>	<u>138,010,000</u>
CURRENT AND ACCRUED LIABILITIES:		
Accounts payable . . . . .	142,264,350	111,842,489
Interest accrued on debt . . . . .	55,578,389	41,030,428
Long-term debt payments due within one year —		
Sinking fund instalments . . . . .	30,741,194	23,581,426
Debt maturities . . . . .	4,526,000	11,027,600
	<u>233,109,933</u>	<u>187,481,943</u>
DEFERRED LIABILITIES . . . . .	25,038,374	19,568,508
RESERVE FOR INSURANCE (Note 3) . . . . .	4,457,301	3,371,737
CONTRIBUTIONS ARISING FROM COLUMBIA RIVER TREATY (Note 1) . .	460,680,311	469,893,917
CONTRIBUTIONS IN AID OF CONSTRUCTION (Note 1) . . . . .	61,255,528	51,507,904
EARNINGS RETAINED IN THE BUSINESS:		
Reserve for stabilization of rates (Note 6) . . . . .	15,000,000	15,000,000
Other retained earnings . . . . .	141,876,429	138,526,886
	<u>156,876,429</u>	<u>153,526,886</u>
COMMITMENTS AND CONTINGENCIES (Note 8)		
	<u>\$3,556,085,180</u>	<u>\$3,078,462,627</u>

## BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

## STATEMENT OF LONG-TERM DEBT AS AT 31 MARCH 1975

Interest Rate %	Series	Date of Maturity	1975	1974
<i>Issued by British Columbia Hydro and Power Authority—</i>				
Bonds:				
3¼	B	1 October 1979	\$ 10,000,000	\$ 10,000,000
8 ⅞	DT	2 January 1982	25,000,000	—
5¼	A	1 May 1982	32,496,300	32,496,300
9¾	DV	3 December 1982	100,000,000	—
8 ⅞	DW	19 February 1985	100,000,000 (1)	—
5.46	W-A	1 February 1987	80,396,000	80,396,000
5.71	W-B	1 February 1988	95,001,000	95,001,000
6.68	W-C	3 February 1989	65,862,000	65,862,000
7.32	WD	2 September 1989	68,396,000	68,396,000
7.77	WE	2 March 1991	110,949,000	110,949,000
5¾	U	18 April 1991	40,000,000	40,000,000
5¾	X	1 July 1991	5,000,000	5,000,000
5%	Y	2 July 1991	45,000,000 (2)	46,250,000 (2)
6¼	AG	1 December 1991	20,000,000	20,000,000
5 ⅞	AH	2 January 1992	50,000,000 (2)	50,000,000 (2)
7.10	WF	2 March 1992	109,182,000	109,182,000
6	AJ	15 March 1992	25,000,000	25,000,000
6	BA	29 May 1992	2,500,000	2,500,000
6¼	AK	1 June 1992	50,000,000 (2)	50,000,000 (2)
6.10	AL-A	2 July 1992	10,000,000	10,000,000
6¼	AM	4 July 1992	25,000,000	25,000,000
6¼	BB	19 July 1992	4,000,000	4,000,000
6½	AP	1 November 1992	20,000,000	20,000,000
6¾	BC	1 February 1993	10,200,000	10,200,000
6¾	Z-S	15 February 1993	3,300,000	3,300,000
6¾	Z-T	15 February 1993	4,200,000	4,200,000
5	C	1 March 1993	15,000,000	15,000,000
7.33	WG	9 March 1993	73,847,000	73,847,000
6 ⅞	AR	29 March 1993	10,000,000	10,000,000
5¼	D	1 May 1993	25,000,000	25,000,000
5¼	F	1 June 1993	10,000,000	10,000,000
7¼	AS	1 June 1993	10,000,000	10,000,000
7¼	BD	2 July 1993	5,500,000	5,500,000
7	AU	5 August 1993	10,000,000	10,000,000
7	AV	1 October 1993	10,000,000	10,000,000
5¼	G	15 October 1993	15,000,000	15,000,000
7	BE	1 December 1993	12,800,000	12,800,000
7	Z-G	15 December 1993	7,000,000	7,000,000
5¼	H	15 December 1993	10,000,000	10,000,000
5¼	J	1 March 1994	10,000,000	10,000,000
7.54	WH	4 March 1994	91,105,000 (3)	91,105,000 (3)
7½	AW	31 March 1994	10,000,000	10,000,000
7½	AX	2 June 1994	25,000,000	25,000,000
	Carried forward		\$1,461,734,300	\$1,237,984,300



Interest Rate %	Series	Date of Maturity		1975	1974
	Brought forward			\$1,461,734,300	\$1,237,984,300
8.46	VM	3 June	1994	10,000,000	—
8.46	VN	4 June	1994	8,000,000	—
5¼	L	2 July	1994	10,000,000	10,000,000
8.58	VP	2 July	1994	10,000,000	—
8.58	VR	3 July	1994	5,237,000	—
7¾	AY	1 October	1994	30,000,000	30,000,000
9.14	VS	1 October	1994	10,000,000	—
9.14	VT	2 October	1994	4,235,000	—
9.25	VU	7 November	1994	10,000,000	—
9.25	VV	8 November	1994	2,137,000	—
8	CA	1 December	1994	10,000,000	10,000,000
5¼	M	15 December	1994	20,000,000	20,000,000
8	CB	30 December	1994	15,000,000	15,000,000
8.46	VW	7 February	1995	7,000,000	—
5¼	N	15 March	1995	10,000,000	10,000,000
8	CC	31 March	1995	20,000,000	20,000,000
8	CD	31 March	1995	5,000,000	5,000,000
8	CE	1 August	1995	10,000,000	10,000,000
5¾	S	15 September	1995	10,000,000	10,000,000
5½	T	29 December	1995	29,000,000 (4)	29,000,000 (4)
7.54	CF	30 December	1995	15,000,000	15,000,000
6.90	CH	30 March	1996	10,000,000	10,000,000
6.90	CJ	30 March	1996	20,000,000	20,000,000
7.25	CK	1 October	1996	20,000,000	20,000,000
7.25	CL	1 October	1996	5,000,000	5,000,000
6.93	CM	15 December	1996	20,000,000	20,000,000
6.93	CN	15 December	1996	5,000,000	5,000,000
6.90	CP	1 March	1997	7,000,000	7,000,000
7.38	CR	15 June	1997	10,000,000	10,000,000
7.76	CT	3 November	1997	25,000,000	25,000,000
7.76	CU	15 November	1997	4,000,000	4,000,000
7.63	CV	15 December	1997	5,000,000	5,000,000
7.63	CW	15 December	1997	25,000,000	25,000,000
7.48	CX	30 March	1998	25,000,000	25,000,000
8	CZ	3 July	1998	20,000,000	20,000,000
8	DA	1 September	1998	30,000,000	30,000,000
8 ½	DB	1 November	1998	13,000,000	13,000,000
8 ½	DC	1 November	1998	7,000,000	7,000,000
8.30	DD	1 December	1998	7,000,000	7,000,000
8.30	DE	15 December	1998	5,000,000	5,000,000
8.30	DF	15 December	1998	15,000,000	15,000,000
8.55	DG	15 February	1999	15,000,000	15,000,000
8.55	DH	15 February	1999	5,000,000	5,000,000
	Carried forward			\$2,010,343,300	\$1,719,984,300

## BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

## STATEMENT OF LONG-TERM DEBT AS AT 31 MARCH 1975 (continued)

Interest Rate %	Series	Date of Maturity		1975	1974
	Brought forward			\$2,010,343,300	\$1,719,984,300
8.70	DJ	29 March	1999	25,000,000	25,000,000
8.70	DK	29 March	1999	5,000,000	5,000,000
9.45	DL	15 May	1999	25,000,000	—
9.45	DM	15 May	1999	5,000,000	—
10½	DR	30 August	1999	12,000,000	—
10¼	DN	1 October	1999	100,000,000 (2)	—
10.40	DS	15 October	1999	15,000,000	—
10	DU	2 January	2000	50,000,000	—
9¾	DZ	10 February	2000	10,000,000	—

Issued by the former British Columbia Electric Company Limited—

First Mortgage Bonds, after deducting bonds redeemed in accordance with sinking fund requirements:

3½	"E"	1 March	1975	—	11,027,600
3¾	"G"	1 December	1976	12,263,400 (2)	12,753,000 (2)
4¾	"H"	1 December	1977	8,508,700	9,004,000
4¾	"I"	1 February	1979	8,854,300	9,331,400
3¾	"J"	1 June	1980	9,498,600	9,919,000
4¼	"K"	1 February	1981	18,821,200	19,739,900
5	"L"	1 February	1982	26,137,100	27,390,700
5⅛	"M"	2 January	1988	33,172,300	34,914,300
5½	"N"	1 March	1989	20,847,500	21,837,900
6½	"O"	1 April	1990	22,833,400	23,660,000
5¾	"P"	1 May	1991	11,652,400	12,063,000
4	"F"	1 July	1991	1,649,900	1,823,000

Perpetual Callable Bonds:

4				204,000	217,500
4¼				82,200	87,250
4½				119,000	141,150
4¾				343,600	399,800
5				305,900	328,150
5½				202,400	215,100

25-year Callable Bonds:

4	AA	1 August	1986	11,796,000	11,782,500
4¼	AB	1 August	1986	10,917,800	10,912,750
4½	AC	1 August	1986	14,881,000	14,858,850
4¾	AD	1 August	1986	26,069,800	26,013,600
5	AE	1 August	1986	24,694,100	24,671,850
5½	AF	1 August	1986	14,797,600	14,784,900

Sinking Fund Debentures, after deducting debentures redeemed in accordance with sinking fund requirements:

5¾	A	1 April	1977	33,200,000	33,600,000
	Carried forward			\$2,569,195,500	\$2,081,461,500

Interest Rate %	Series	Date of Maturity	1975	1974
	Brought forward		\$2,569,195,500	\$2,081,461,500
<i>Issued by the former British Columbia Power Commission—</i>				
<b>Bonds:</b>				
3¼	J	4 July 1975	10,000,000	10,000,000
3	S	1 April 1976	17,738,000	17,738,000
3%	T	1 April 1977	9,285,000 (5)	9,285,000 (5)
5	MC	15 September 1982	5,149,000	5,149,000
4	G	1 November 1988	10,000,000 (2)	10,000,000 (2)
3¼	H	15 July 1989	6,300,000 (2)	6,300,000 (2)
3¼	C	15 September 1991	3,000,000	3,000,000
4	D	21 May 1992	1,000,000	1,000,000
4	E	15 June 1992	1,000,000	1,000,000
4	F	15 September 1992	1,500,000	1,500,000
5	MD	15 September 1992	18,724,000	18,724,000
5	N	15 September 1992	10,000,000	10,000,000
<b>Debentures:</b>				
3¼	K	15 June 1986	20,000,000 (2)	20,000,000 (2)
4¾	L	15 April 1987	25,000,000 (2)	25,000,000 (2)
3¾	P	1 February 1988	20,000,000 (2)	20,000,000 (2)
			<u>2,727,891,500</u>	<u>2,240,157,500</u>
Exchange premium at date of issue on long-term debt payable in United States funds			<u>7,788,837</u>	<u>8,880,773</u>
			2,735,680,337	2,249,038,273
<i>Less—</i>				
Sinking funds on deposit with Trustee, Minister of Finance for the Province of British Columbia			<u>185,745,839</u>	<u>159,327,515</u>
			<u>\$2,549,934,498</u>	<u>\$2,089,710,758</u>
(1) \$50,000,000 payable 19 February 1984 (selected by lot).				
(2) Payable in United States funds.				
(3) Issued in consolidation of Series VZ and VA-VL sold during period 9 April 1973 to 4 March 1974.				
(4) Redeemable at option of holder on 29 December 1975.				
(5) Payable in Canadian or United States funds at option of holder.				
<i>Classification on balance sheet—</i>				
Long-term debt			\$2,514,667,304	\$2,055,101,732
Long-term debt payments due within one year:				
Sinking fund instalments			30,741,194	23,581,426
Debt maturities, less sinking fund (excluding bonds referred to in (4) above)			<u>4,526,000</u>	<u>11,027,600</u>
			<u>\$2,549,934,498</u>	<u>\$2,089,710,758</u>

Long-term debt and sinking fund requirements for the years ending 31 March 1977 to 1980 are \$40,900,000, \$68,400,000, \$35,700,000 and \$31,100,000 respectively.

## NOTES TO FINANCIAL STATEMENTS AS AT 31 MARCH 1975

**Note 1 – Summary of significant accounting policies:**

The accounting policies of B.C. Hydro conform to generally accepted accounting principles for public utilities. A description of significant accounting policies follows.

**Plant and depreciation –**

The cost of plant financed by contributions arising from the Columbia River Treaty and by contributions in aid of construction, which include grants for rural electrification from the Government of the Province of British Columbia and amounts paid by customers towards construction of plant, is included in property account. Contributions arising from the Columbia River Treaty are being amortized over the remaining term of the Treaty, and the credit resulting therefrom is offset against and is equal to the annual provision for depreciation of the related assets. Contributions in aid of construction are being amortized over the estimated service lives of the related assets, and the credit resulting therefrom is offset against the applicable provision for depreciation.

Consistent with the accounting practice adopted in 1968, the construction costs of the dam, powerhouse and other common property relating to the Peace River Project are being transferred to plant in service by instalments proportionate to the number of completed and operational generating units in relation to the ten units presently contemplated. The transfers are to be completed not later than 31 March 1976. By 31 March 1975, nine generating units were in service and consequently 90% of the cost of the dam, powerhouse and other common property had been transferred to plant in service. The amount not yet transferred to plant in service is included in deferred costs under property account.

The difference of \$99,914,491 as at 31 March 1975 (\$89,624,500 as at 31 March 1974) between construction costs associated with the three Columbia River Treaty storage projects and the total contributions arising from the Columbia River Treaty is considered to relate to the future generation of power at the Mica damsite on the Columbia River and has also been included in deferred costs under property account. These costs will be transferred to plant in service as the Mica generating plant becomes operational.

B.C. Hydro charges interest to these deferred costs and to plant under construction at rates equivalent to the cost of borrowing funds.

The depreciation policy of B.C. Hydro is to allocate the original cost of plant to operations over the estimated service lives of the assets. Depreciation is provided on all depreciable assets in service at the beginning of each year and is computed on the straight-line method.

**Unamortized discount and expense on debt –**

These costs are amortized by charges to expense over the original life of the respective issues.

**Foreign exchange –**

The liability for long-term debt payable in United States dollars has been translated to Canadian dollars at the rates of exchange prevailing at the date the debt was incurred. Translated at the rates prevailing at 31 March 1975, the liability for long-term debt payable in United States dollars would have been reduced by approximately \$6,600,000.

Current and working assets and current and accrued liabilities in United States dollars are translated at the rate of exchange prevailing at the date of the balance sheet. The resulting unrealized profits or losses, which were not significant for the years ended 31 March 1975 and 1974, have been included in income.

**Note 2 – Temporary investments:**

	1975	1974
Short-term deposits and investment receipts—		
Banks . . . . .	\$49,011,050	\$28,040,000
Other financial institutions . . . . .	5,000,000	5,021,564
	<u>\$54,011,050</u>	<u>\$33,061,564</u>

### Note 3 – Funded reserve for insurance:

In 1969, B.C. Hydro generally adopted a policy of self-insurance for damage to plant and equipment and for general liability where insurance was formerly purchased. An insurance reserve is being accumulated by annual charges to operations commensurate with the current cost of insurance. Funds equivalent to the reserve for insurance are invested in government and municipal bonds and short-term deposits with financial institutions.

Insurance coverage on major projects under construction has been purchased either by B.C. Hydro or by its contractors as required by B.C. Hydro. Motor buses, trolley coaches and service vehicles are insured by the Insurance Corporation of British Columbia. Fire insurance coverage on certain plant and equipment is also purchased to comply with trust deed requirements.

### Note 4 – Guarantee by Province of British Columbia:

The Government of the Province of British Columbia has unconditionally guaranteed the principal and interest of the long-term debt and Parity Development Bonds.

### Note 5 – Pension plans:

Employees of B.C. Hydro are covered under contributory pension plans, and provisions are being made for current services according to the requirements of the various plans. Provision has been made for all known past service costs under these plans with the exception of those relating to a contributory plan introduced effective 1 January 1965. B.C. Hydro is funding the estimated past service costs of this plan by annual payments of \$393,800 over a fifteen-year period which commenced 1 April 1967. An actuarial survey of the plan will be made as at 31 December 1974; the last such survey was made as at 31 December 1970. The charge to income in respect of pension plans, including provision for supplementary payments and B.C. Hydro's share of Canada Pension Plan costs, for the year ended 31 March 1975 was \$8,488,927 (1974 – \$6,228,456).

### Note 6 – Reserve for stabilization of rates:

This reserve is available to delay or minimize upward adjustments in electric and gas rates that might otherwise be necessary to cover short-term losses in operations.

### Note 7 – Interest on debt:

	1975	1974
Gross interest . . . . .	\$170,130,530	\$140,890,318
Amortization of discount and expense . . . . .	1,671,123	1,942,721
	<u>171,801,653</u>	<u>142,833,039</u>
Less—		
Income from sinking fund investments held by Trustee . . . . .	10,810,479	9,032,129
	<u>\$160,991,174</u>	<u>\$133,800,910</u>

The interest rate on Series CG, CS and CY Parity Development Bonds was increased to 8½% from rates varying from 6% to 7% effective 1 September 1974.

### Note 8 – Commitments and contingencies:

Purchase commitments and contracts of B.C. Hydro for capital projects aggregated approximately \$426,000,000 as at 31 March 1975.

A lawsuit was started on 17 July 1967 in the Supreme Court of British Columbia by the contractors constructing the underground powerhouse and associated works at Gordon M. Shrum Generating Station, alleging breach of contract. Amounts between \$20 million and \$30 million were claimed as damages. During the trial, the contractors introduced an alternative claim to which they gave priority for the total cost to them of the construction work, including interest and profit, and a balance owing of \$51 million was claimed. The alternative claim has been tried, and judgment has been delivered declaring the contractors to be entitled to compensation on the basis of quantum meruit. No assessment has been made by the Court of the amount of such compensation. In further Reasons for Judgment, dated 28 February 1975, the Trial Judge directed that compensation to the contractors based on quantum meruit be determined prior to either party appealing the judgment; proceedings resumed for this purpose on 14 April 1975. Any amount paid by B.C. Hydro as a result of this litigation will be capitalized as part of the cost of construction of the station and included in property account.

# FINANCIAL STATISTICS

(in millions of dollars)

YEAR ENDED 31 MARCH	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966
<b>SOURCES OF REVENUE</b>										
Electric . . . . .	296.8	268.0	235.0	211.4	193.0	162.8	149.4	137.7	118.4	104.9
Gas . . . . .	77.6	60.7	55.2	51.7	47.5	41.0	40.6	34.4	32.1	31.2
Passenger transportation . . . . .	30.5*	27.7*	25.1*	24.2*	21.3*	20.7*	19.5*	18.1	17.6	16.9
Rail freight . . . . .	13.1	12.1	10.8	10.2	8.0	8.4	7.4	7.0	6.4	6.2
Miscellaneous . . . . .	7.3	7.7	8.8	8.4	7.1	7.0	4.2	4.3	3.6	1.6
Total . . . . .	425.3	376.2	334.9	305.9	276.9	239.9	221.1	201.5	178.1	160.8
<i>*Includes metropolitan transit subsidy received from Provincial Government.</i>										
<b>DISPOSITION OF REVENUE</b>										
Salaries, wages and employee benefits . . . . .	117.9	88.5	72.7	67.5	57.9	55.1	49.6	44.0	40.1	36.7
Materials and services . . . . .	88.1	76.0	53.0	51.0	45.2	40.4	44.9	43.4	36.7	32.5
Grants, school taxes and water rentals . . . . .	28.8	25.0	22.2	20.0	18.6	17.0	15.0	13.3	11.3	10.6
Depreciation . . . . .	65.8	61.7	57.7	52.9	50.2	44.7	38.6	34.7	31.7	28.8
Interest on debt, less interest charged to construction . . . . .	121.4	110.7	108.1	97.7	88.9	83.1	63.7	53.2	49.0	44.7
Retained in the business (withdrawal) . . . . .	3.3	14.3	21.2	16.8	16.1	(.4)	9.3	12.9	9.3	7.5
Total . . . . .	425.3	376.2	334.9	305.9	276.9	239.9	221.1	201.5	178.1	160.8
<b>EXPENDITURES ON PLANT . . . . .</b>	<b>463.8</b>	<b>332.3</b>	<b>230.2</b>	<b>217.9</b>	<b>216.0</b>	<b>189.6</b>	<b>227.3</b>	<b>341.2</b>	<b>324.1</b>	<b>227.5</b>

## OPERATING STATISTICS

YEAR ENDED 31 MARCH	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966
<b>ELECTRIC</b>										
Generating nameplate capacity at year-end (rated kw in thousands)*										
Hydro . . . . .	3,618	3,318	3,318	2,814	2,455	2,455	2,001	1,320	1,320	1,306
Thermal . . . . .	1,104	1,061	1,041	1,038	1,059	1,056	1,055	906	752	738
Total . . . . .	4,722	4,379	4,359	3,852	3,514	3,511	3,056	2,226	2,072	2,044
Peak one-hour demand, integrated system (kw in thousands) . . . . .	3,791	3,578	3,499	2,970	2,769	2,499	2,357	2,152	1,860	1,686
Customers at year-end (in thousands) . . . . .	843	801	765	726	690	652	605	583	555	529
Electricity sold (kwh)										
Total (in millions) . . . . .	21,496	21,940	19,103	16,174	14,833	13,656	12,237	11,084	10,000	8,506
Increase (decrease) over previous year (%) . . . . .	(2.0)	14.9	18.1	9.0	8.6	11.6	10.4	10.8	17.6	15.8
By class of customer (%)										
Residential . . . . .	27	24	25	28	28	27	28	28	28	30
General . . . . .	32	30	31	34	32	32	33	33	34	34
Bulk . . . . .	36	36	37	36	36	37	37	37	36	34
Other systems . . . . .	1	1	1	1	1	2	2	2	2	2
Export** . . . . .	4	9	6	1	3	2	—	—	—	—
Residential service										
Average annual kwh use per customer . . . . .	7,928	7,694	7,365	7,342	6,949	6,651	6,674	6,222	6,016	5,650
Average revenue per kwh (cents) . . . . .	2.1	1.9	1.9	1.9	1.9	1.7	1.7	1.7	1.5	1.5
<i>*Excludes electricity available from other systems. Rated capacity has been exceeded on occasion. **Less than 1/2 of 1% 1966 through 1969.</i>										
<b>GAS</b>										
One-day capacity at year-end (therms in thousands)										
Mainland—firm pipeline contracts* . . . . .	3,900	3,260	2,660	2,400	2,460	2,360	2,529	2,260	2,140	2,020
—plant . . . . .	1,000	1,000	1,000	1,000	1,000	250	250	250	250	250
Greater Victoria—plant . . . . .	60	60	60	53	53	45	45	36	36	36
Peak one-day demand (therms in thousands)										
Mainland system—including interruptible . . . . .	3,491	3,640	3,461	3,279	2,939	2,770	3,108	2,537	2,634	2,593
—excluding interruptible . . . . .	3,379	3,136	3,359	3,065	2,762	1,962	2,889	1,905	1,474	1,493
Greater Victoria system . . . . .	22	24	29	29	22	19	24	19	16	17
Customers at year-end (in thousands) . . . . .	249	238	227	215	205	197	186	178	169	161
Gas sold (therms)										
Total (in millions) . . . . .	731	711	649	601	554	485	470	391	357	322
Increase over previous year (%) . . . . .	2.8	9.6	8.0	8.5	14.2	3.1	20.2	9.6	10.7	5.3
Average revenue per therm (cents) . . . . .	10.6	8.5	8.5	8.6	8.6	8.4	8.6	8.8	9.0	9.7
<i>*On basis of 100 cu. ft. to one therm.</i>										
<b>PASSENGER TRANSPORTATION</b>										
Vehicles in operation at year-end										
Urban—buses . . . . .	558	447	335	326	353	340	339	340	321	325
—trolley coaches . . . . .	301	293	293	298	298	296	296	296	296	296
—total . . . . .	859	740	628	624	651	636	635	636	617	621
Interurban buses . . . . .	134	98	91	90	85	66	71	70	56	61
Passengers carried (in millions)										
Urban . . . . .	94.3	85.5	76.7	72.6	65.9	78.7	77.4	74.6	72.7	70.7
Interurban . . . . .	2.9	2.8	2.6	2.5	2.2	2.3	2.2	2.1	2.1	2.0
Revenue miles run—urban (in millions) . . . . .	27.7	23.6	20.4	20.0	19.3	21.2	20.9	20.8	20.5	20.4
Passenger revenue per mile—urban (cents) . . . . .	75.6	80.9	85.2	83.7	78.9	71.6	72.1	71.2	70.2	68.4
<b>RAIL FREIGHT (tons in thousands) . . . . .</b>	<b>2,749</b>	<b>2,799</b>	<b>2,674</b>	<b>2,606</b>	<b>2,200</b>	<b>2,466</b>	<b>2,265</b>	<b>2,057</b>	<b>2,011</b>	<b>1,971</b>
<b>EMPLOYEES AT YEAR-END</b>										
Regular . . . . .	10,361	8,945	7,474	7,173	7,205	7,056	6,905	6,737	6,452	6,250
Temporary . . . . .	1,255	1,080	772	669	481	810	717	614	687	647
Total . . . . .	11,616	10,025	8,246	7,842	7,686	7,866	7,622	7,351	7,139	6,897

## DIVISIONAL ORGANIZATION

<b>OFFICE OF THE CHAIRMAN</b>	P.W. Barchard, <i>Transportation General Manager</i> W.D. Kennedy, <i>Chairman, Canadian Entity Services</i> W.D. Mitchell, <i>Legal Division Manager and General Solicitor</i>
<b>OFFICE OF THE GENERAL MANAGER</b>	T.A. Nordstrom, <i>Computer and Management Systems Division Manager</i>
<b>ADMINISTRATION AND FINANCE</b>	C.W. Nash, <i>Assistant General Manager</i> <b>Division Managers:</b> L.E. Beard, <i>Financial</i> E.S. Collins, <i>Land</i> R.H. Downey, <i>Industrial Relations and Personnel</i> J.A. MacCarthy, <i>Public and Customer Relations</i> D.G. McKillop, <i>General Services</i>
<b>ELECTRICAL OPERATIONS</b>	E.H. Martin, <i>Assistant General Manager</i> <b>Division Managers:</b> W.A. Bateman, <i>Fraser Valley</i> W.A. Best, <i>Central Interior</i> T.V. Farmer, <i>South Interior</i> M.A. Favell, <i>Operations Administration</i> W.D. Gill, <i>Operations Engineering</i> D.J. McLennan, <i>Metropolitan Vancouver</i> G.J. Roper, <i>Vancouver Island</i> P.D. Swoboda, <i>North Coast</i>
<b>ENGINEERING</b>	W.F. Miles, <i>Assistant General Manager</i> W.M. Walker, <i>Chief Engineer</i> <b>Division Managers:</b> E. Crowley, <i>System Design</i> H.M. Ellis, <i>System Engineering</i> J.W. Milligan, <i>Construction</i> F.J. Patterson, <i>Hydroelectric Design</i>
<b>GAS</b>	R.K. Kidd, <i>Assistant General Manager</i> <b>Division Managers:</b> K.S. Henderson, <i>Gas Operations</i> A.H. MacPherson, <i>Gas Engineering</i>



FOLD OUT MAP OF ELECTRIC TRANSMISSION SYSTEM

# BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

## ELECTRIC TRANSMISSION SYSTEM

### AT 31 MARCH 1975

### WITH PLANNED ADDITIONS

#### LEGEND

- HYDROELECTRIC GENERATING STATIONS
- DIESEL-ELECTRIC GENERATING STATIONS
- ▣ GAS-TURBINE-ELECTRIC GENERATING STATIONS
- SUBSTATIONS
- TRANSMISSION LINES 60 KV-360 KV (EXISTING AND UNDER CONSTRUCTION)
- TRANSMISSION LINES 500 KV (EXISTING AND UNDER CONSTRUCTION)
- - - TRANSMISSION LINES 60 KV-360 KV (PLANNED)
- - - TRANSMISSION LINES 500 KV (PLANNED)

#### VANCOUVER AREA

##### MAJOR GENERATING PLANTS

- |                             |                            |
|-----------------------------|----------------------------|
| Alouette: Hydroelectric     | Port Mann: Gas-Turbine     |
| Burrard: Steam-Turbine      | Ruskin: Hydroelectric      |
| Lake Buntzen: Hydroelectric | Stave Falls: Hydroelectric |

#### MAJOR SUBSTATIONS

- |             |                    |
|-------------|--------------------|
| Arnott      | Ingledow           |
| Atchelitz   | Kidd, Nos. 1 and 2 |
| Camosun     | Mainwaring         |
| Cypress     | Murrin             |
| Dal Grauer  | Newell             |
| Horne-Payne | Walters            |

#### VICTORIA AREA

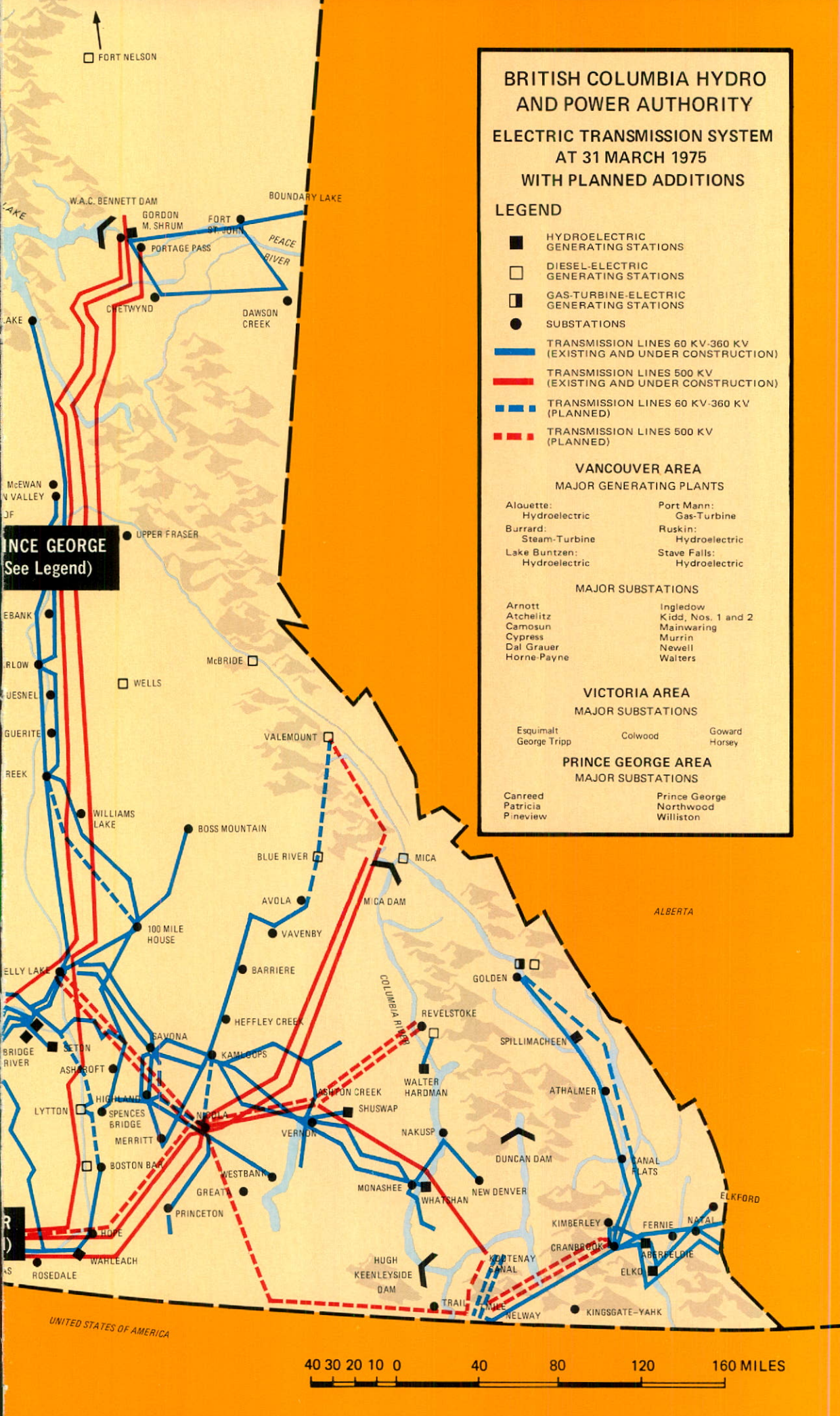
##### MAJOR SUBSTATIONS

- |              |         |         |
|--------------|---------|---------|
| Esquimalt    | Colwood | Goward  |
| George Tripp |         | Horsley |

#### PRINCE GEORGE AREA

##### MAJOR SUBSTATIONS

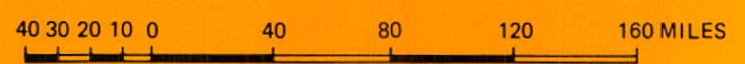
- |          |               |
|----------|---------------|
| Canreed  | Prince George |
| Patricia | Northwood     |
| Pineview | Williston     |



**PRINCE GEORGE**  
See Legend)

UNITED STATES OF AMERICA

ALBERTA





# OUR PEOPLE AT WORK

