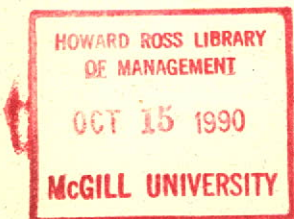


**"Our greatest achievement  
in this past fiscal year  
has been to respond  
successfully to customer  
service demands during  
a period of record growth."**

L.I. Bell, Chairman and Chief Executive Officer

**1 9 9 0  
ANNUAL  
REPORT**



**THE BUSINESS OF  
B.C. HYDRO**

British Columbia Hydro and Power Authority is a provincial Crown Corporation established in 1962 to generate, transmit and distribute electricity.

B.C. Hydro's Board of Directors is appointed by the Lieutenant-Governor in Council and is responsible for the overall direction of the corporation. The corporation's activities are subject to regulation by the British Columbia Utilities Commission.

The third largest electric utility in Canada, B.C. Hydro serves almost 1.3 million customers in an area containing over 92 per cent of British Columbia's population. Most of our customers are served by hydroelectric plants linked together by an interconnected system of transmission lines. Those remote communities not connected to this integrated system are served by small local generating plants.

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B.C. Hydro's mission, objectives, values and vision provide the framework within which the company operates.

## **MISSION**

- To support the economic growth of British Columbia through the efficient supply of electricity.

- To maximize our contribution to the economic development of British Columbia.
- To be the most efficient utility in North America.
- To be recognized by our customers as a superior marketing and customer service company.
- To be one of the best employers in British Columbia.

## **OBJECTIVES**

## **VALUES**

- Integrity: Our actions match our words.
- Innovation: We try new ideas and learn from our mistakes.
- Commitment: Our enthusiasm is contagious.
- Teamwork: We work together towards shared goals.
- Empowerment: (Empowered teams define their own appropriate behavior.)

- B.C. Hydro will be a commercial, public enterprise enhancing the quality of life and productivity of the people of British Columbia.

## **VISION**

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## MANAGEMENT PRINCIPLES

Managers at B.C. Hydro are encouraged to be: ■ Results oriented ■ Market competitive ■ Excellence driven ■ Environment and community sensitive.

We strive to promote better accountability by measuring and reporting on our efforts in meeting our mission and objectives.

We have initiated a strategy for reporting on effectiveness that will enhance our accountability and foster good management and decision-making.

A part of our strategy is a program of comprehensive audits of key operating areas. These focus on 12 key attributes.

## EFFECTIVENESS ATTRIBUTES

- Management Direction: Does everyone understand what they are meant to be doing?
- Relevance: Do activities continue to make sense?
- Appropriateness: Are we going about our objectives in the best way?
- Achievement of Intended Results: What succeeded? How challenging were the goals?
- Acceptance: Do those who use a service judge it to be satisfactory?
- Secondary Impacts: What unintended effects are occurring?
- Costs and Productivity: Is output increasing while costs are decreasing?
- Responsiveness: How well do we anticipate and respond to change?
- Financial Results: How do revenues compare with costs? How do assets compare with obligations?
- Working Environment: Does it promote commitment, initiative, safety and employee development?
- Protection of Assets: How well protected are key resources?
- Monitoring and Reporting: Does everyone have and use the information they need?

## EFFECTIVENESS STRATEGY

## HIGHLIGHTS

<i>for the years ended or as at March 31</i>	1990	% Change	1989	% Change	1988	% Change
<b>FINANCIAL PERFORMANCE</b>						
<i>(dollar amounts in millions)</i>						
Domestic revenues	\$ 1,706	2.8	\$ 1,660	8.2	\$ 1,534	3.2
Export revenues	115	5.5	109	(40.8)	184	97.8
	<u>\$ 1,821</u>	<u>2.9</u>	<u>\$ 1,769</u>	<u>3.0</u>	<u>\$ 1,718</u>	<u>8.8</u>
Income (loss)						
Domestic	\$ 55		\$ 10		\$ (36)	
Export (stabilized)	64		72		72	
Other	41		4		19	
Net income	<u>\$ 160</u>	<u>86.0</u>	<u>\$ 86</u>	<u>56.4</u>	<u>\$ 55</u>	<u>120.0</u>
Debt to equity ratio	80:20		80:20		84:16	
Interest coverage	1.20		1.09		1.04	
Effective annual rate increase	1.3%		NIL		NIL	

## UNIT PERFORMANCE PER SALES VOLUME

*(cents per kilowatt-hour)*

## DOMESTIC

Revenue-composite	<u>4.4</u>	<u>4.4</u>	<u>4.3</u>
Unit costs			
Operations, maintenance and administration	0.9	0.7	0.7
Finance charges and depreciation	2.5	2.9	2.9
Cost of energy and taxes	0.9	0.8	0.8
Total costs	<u>4.3</u>	<u>4.4</u>	<u>4.4</u>
Operating income (loss)	<u>0.1</u>	<u>—</u>	<u>(0.1)</u>

## EXPORT

Revenue-composite	<u>3.1</u>	<u>2.2</u>	<u>1.9</u>
Unit cost of energy	<u>2.0</u>	<u>1.1</u>	<u>0.8</u>
Operating income	<u>1.1</u>	<u>1.1</u>	<u>1.1</u>

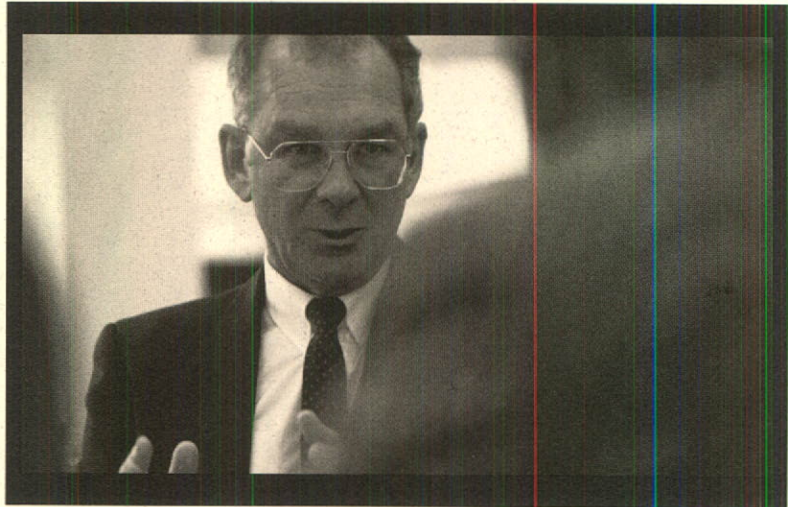
## UNIT PERFORMANCE PER REGULAR EMPLOYEE

*(domestic and export)*

Average number of customers	265	261	243
Electricity sold ( <i>megawatt-hours</i> )	9 081	9 127	9 249
Revenue ( <i>dollars in thousands</i> )	\$ 386	\$ 378	\$ 349

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## CHAIRMAN'S LETTER



I am delighted, on behalf of the Board, management and all employees of B.C. Hydro, to submit the 1990 Annual Report.

Our greatest achievement in this past fiscal year has been to respond successfully to customer service demands during a period of record growth.

In addition, the adoption of an environmental resolution by our directors signalled our commitment to developing a new "energy ethic" in order to protect the valuable resource entrusted to us. We are constantly exploring ways to produce electricity with the smallest possible impact on the environment.

We recognize that the province of British Columbia is currently one of the world's largest electrical energy consumers on a per capita basis. While our kilowatt-hour costs remain comparatively low, we are nevertheless encouraging our customers to use energy efficiently through a variety of innovative programs.

Our Power Smart initiative, for example, is already recognized as the leading customer-oriented energy conservation program in North America. We are also implementing a Resource Smart program to ensure that we are receiving optimum output from our power production facilities.

We are encouraging the private sector to play an increasing role in meeting British Columbia's electrical energy requirements. Independent power producers are being invited to find ways of supplementing our system, and we are urging our industrial transmission customers -

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the largest energy consumers – to generate their own power requirements to free up the system for other customers.

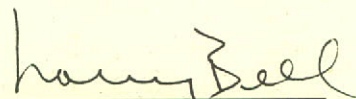
And finally, we are also working with developers and contractors to find ways where they can reduce costs associated with the provision of electric services. For example, customers requiring lines on private property can now choose to do the work themselves, have it done by Hydro or use a private contractor.

Reliability of service remains a critical factor in the way we measure our success. Baselines established in recent years allow us to chart our progress on an annual basis and we have set standards in such areas as response time to customer calls and number and length of service interruptions.

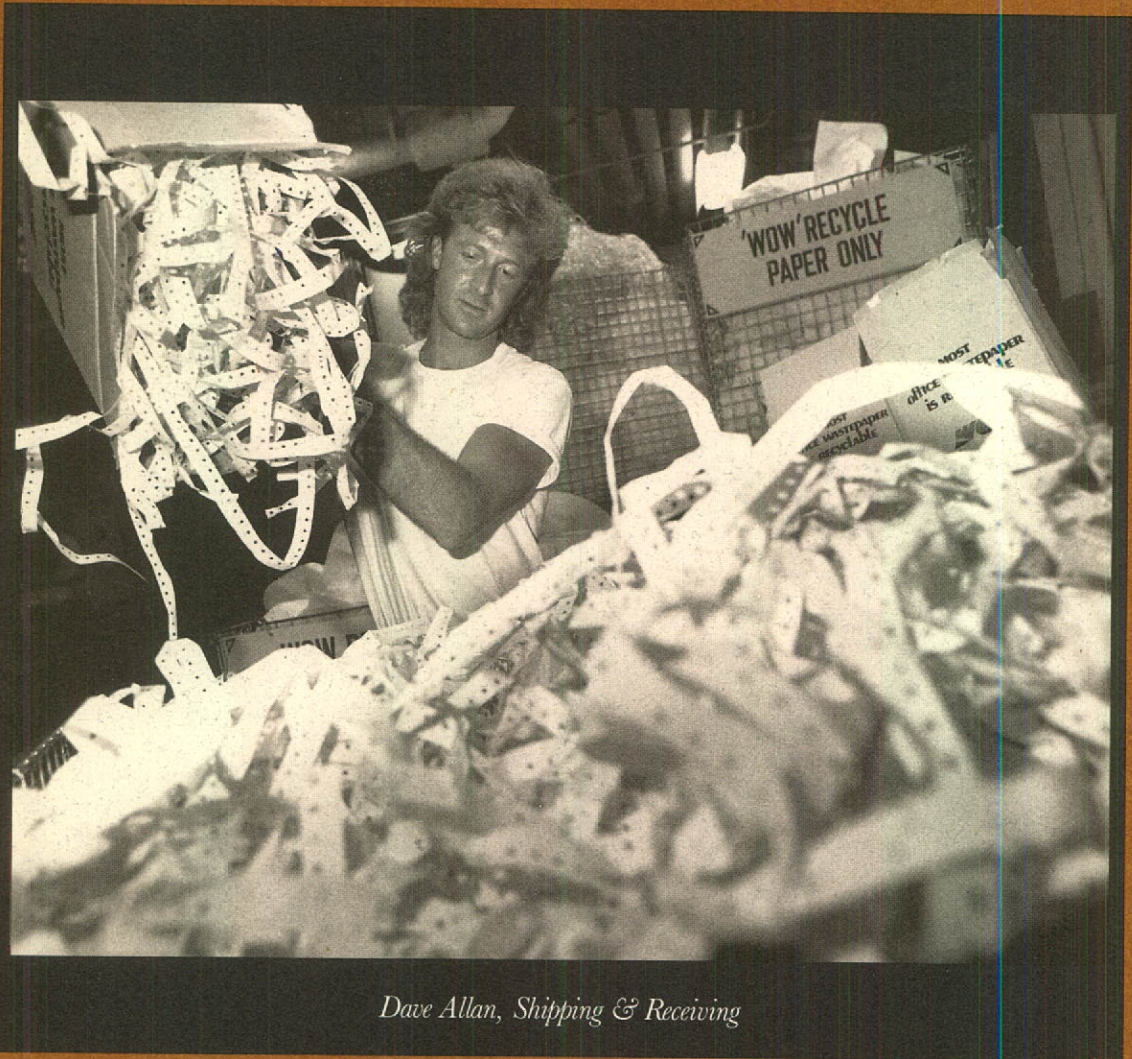
The great strides we have been able to make reflect the talent and commitment of B.C. Hydro employees. It is my belief that the greatest concentration of technological skills in this province reside at Hydro. But this talent pool also needs the tools to keep up with rapidly changing technology. Therefore the Human Resources function is receiving greater attention, particularly in the areas of training and employee development.

Coupled with the need for a highly skilled and motivated workforce is the recognition that the continued success of our organization will rely on our ability to cope quickly with change. This cannot be done in a bureaucratic organization reliant on multi-layers of approval. That is why we are providing managers and supervisors with the authority and responsibility to conduct their business in the best way they see fit. Inherent in this employee empowerment is accountability to our customers.

This emphasis on accountability is also reflected in the many public consultation programs we have now implemented. It is our belief that, given the increasing complexity of our planning process and the heightened awareness of environmental issues, we are not only obliged to seek but require the input of more and more British Columbians in order to make sound decisions. To put it simply, there is nothing within our operations we are not prepared to talk about. We have accomplished a great deal and we are proud of everything we do.



L.I. (Larry) Bell  
*Chairman and Chief Executive Officer*



*Dave Allan, Shipping & Receiving*

## **BALANCED DEVELOPMENT**

A corporate environmental policy and the search for energy options are strategies to maintain a balanced approach to development.

Among the many innovations is the We-cycle Office Waste program that is recovering an average of 1134 kilograms of office waste paper a week.



Being “results-oriented” is one of B.C. Hydro’s fundamental management principles. This principle is being promoted throughout the organization by the use of key performance indicators which measure and evaluate progress in accomplishing an objective.

An important innovation during the past fiscal year was the introduction of performance ranges. A performance range is comprised of three target levels:

- Excellence: superior performance achieved by working and managing smarter.
- Expected: average or most probable level of performance.
- Minimally Acceptable: a minimum standard which signals the need for action to improve performance.

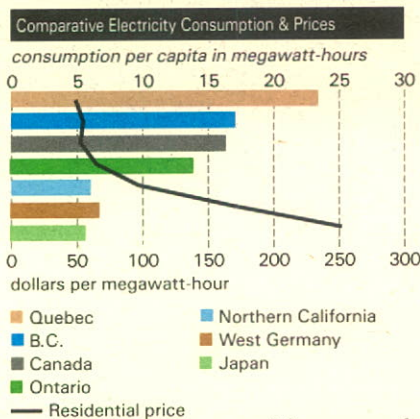
B.C. Hydro’s progress in accomplishing its four corporate objectives in fiscal 1990 is reviewed in terms of actual achievements compared to target key performance indicators. Targets included on the charts in this section are the “expected” performance range.

**TO MAXIMIZE OUR CONTRIBUTION TO THE ECONOMIC DEVELOPMENT OF BRITISH COLUMBIA.**

**ELECTRICITY PRICING**

Our pricing objective is to foster economic development while at the same time to encourage energy conservation. B.C. Hydro is moving

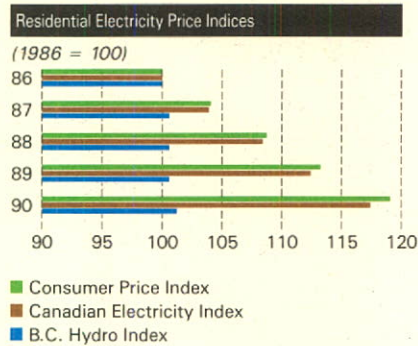
towards using its rates as a policy tool. Our recent application to the British Columbia Utilities Commission marked a change in pricing from one based on historical cost to one based on public policy.



Price is an important factor in determining how efficiently electric resources are used. Our average residential rate of 5.5 cents per kilowatt-hour (based on 1000 kilowatt-hours per month usage) is among the lowest in the Western world and, over the past five years, has declined in real terms by 15 per cent after inflation is taken into account. Canada’s electricity consumption per capita is the second highest in the world while consumption in British Columbia is the second highest in Canada at 17 000 kilowatt-hours per capita.

Our rate application for a series of three per cent rate increases was made as part of our long-range strategy designed to promote energy conservation, provide certainty for our customers and avoid rate shocks

in the future. This application was not granted in its entirety by the Commission. A rate increase of three per cent effective November 15, 1989 was approved while additional increases of three per cent effective April 1, 1990 and 1991 were each reduced to 1.5 per cent.



#### PAYMENTS TO THE PROVINCE

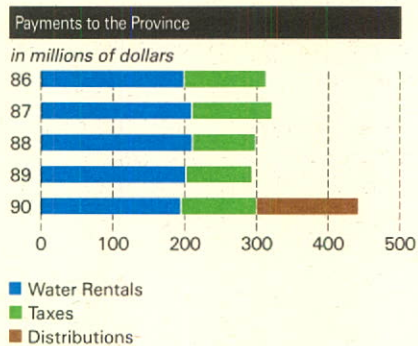
B.C. Hydro makes significant contributions to the provincial government and municipal governments through the payment of water rentals and property taxes. These costs comprise

18 per cent of the total domestic cost of electricity.

Despite the significant level of these payments, our unit costs continue to compare favourably with other utilities. This performance is a combination of our relatively low cost hydro-electric system and our efforts to manage and

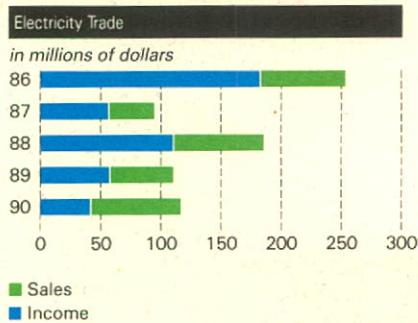
control costs. As a consequence of these efforts, our return on equity has improved to more than nine per cent from six per cent in 1989.

Hydro made a distribution to the Province from distributable surplus for the first time in our history.



## ELECTRICITY TRADE

Our hydroelectric system is in resource balance which means that,



under critically low water conditions, the capability of the system to supply is equal to the demand for electricity. From time to time there may be the capacity from favourable water conditions to make surplus energy available for trade with other utilities. In 1990 there was no surplus capacity, and therefore trade consisted of resale of power purchased from others. Although trade

revenues increased over the previous year, income has declined, reflecting the lower profit margin realized on brokered power.

## SALE OF SURPLUS ASSETS

One initiative in improving asset management is the sale of surplus assets. This program places land back into the economic development cycle and reduces our carrying costs, including interest. Over the last 10 years, B.C. Hydro's surplus property has been reduced by \$79 million. The gain in 1990 of \$13 million on the sale of surplus assets was lower than the \$22 million of 1989, but Hydro will also benefit from reduced carrying costs through lower property taxes and interest.

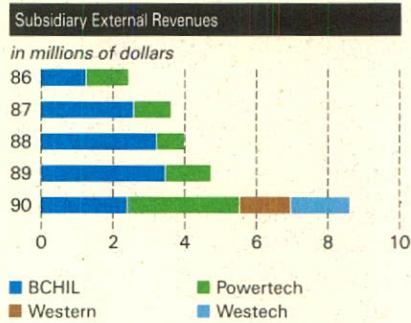
## PURCHASING IN BRITISH COLUMBIA

B.C. Hydro expanded purchasing in B.C. last year through a company-wide supplier development program. Purchases from B.C. businesses under this program increased from \$6 million in 1989 to \$15 million in 1990. Development of the company's Geographic Facilities Information System resulted in \$10 million of extra business for the province and the creation of many new jobs in the communities of Kamloops and Vernon.

Encouraging local and regional suppliers is a further corporate purchasing initiative. Under this initiative local and regional suppliers throughout the Province were awarded contracts which previously went to suppliers from Greater Vancouver, Victoria or outside the province.

## SUBSIDIARY REVENUE

In 1989, Powertech Labs, Westech Information Systems and Western Integrated Technologies were established as subsidiaries and are now



actively involved in pursuing new clients:

- Powertech is internationally recognized for its chemical, electrical and materials research.
- Westech specializes in the design, development and support of integrated computer systems.
- Western is one of Canada's leading information processing companies.

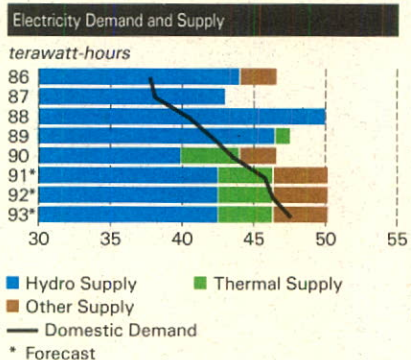
In the past year, these subsidiaries recorded external sales of \$6 million compared with \$1 million in 1989.

A fourth subsidiary, British Columbia Hydro International (BCHIL), uses B.C. Hydro's engineering expertise to design and operate electric facilities for Canadian and international clients on a joint venture basis with other consulting engineering firms. During 1990, BCHIL worked on 14 contracts for clients outside the province, an increase of four from 1989. Examples of BCHIL activities include the supply of air gap monitoring systems to a hydroelectric project in Venezuela and acting as a sub-consultant for a 400-kilovolt undersea cable crossing the Gulf of Aqaba.

## TO BE THE MOST EFFICIENT UTILITY IN NORTH AMERICA.

### ELECTRICITY PLAN

Domestic demand for electricity increased by approximately three per cent in fiscal 1990 to 39 030 gigawatt-hours. Combined with lower water levels, this resulted in domestic demand exceeding the supply of



energy from hydroelectric generation by over eight per cent. The balance of domestic demand was met by the operation of the Burrard Thermal generating station and purchases of power from other utilities. Operation of Burrard Thermal, recommissioned in 1989, generated 4143 gigawatt-hours of energy in fiscal 1990, up from 515 gigawatt-hours in 1989.

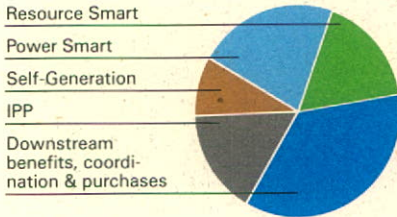
Energy demand is projected to increase by approximately three per cent per year during the 1990s.

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## ELECTRICITY SUPPLY ALTERNATIVES

B.C. Hydro is developing innovative supply alternatives in order to

Additional Energy Sources in the Year 2000



meet the province's energy needs in the 1990s and into the next century. During 1990 significant progress was made on four key initiatives: Power Smart, Resource Smart, Independent Power Producers and Self-Generation / Load Displacement.

### *Power Smart*

The Power Smart initiative encompasses 25 programs, the purpose of which is to reduce the future demand for electricity by encouraging more efficient energy use. These programs are directed at residential, commercial and industrial customers. Examples of these programs include "Quality Plus Homes" for residential customers, "Municipal Energy Audits" for commercial and institutional customers and "High Efficiency Motors" for industrial customers.

Estimated energy savings through Power Smart to the end of March 1990 were 70 gigawatt-hours.

### *Resource Smart*

Resource Smart is a broadly-based initiative to ensure that full economic use is made of the capacity and energy potential of our existing generation, transmission and distribution facilities. For example, by making changes to the riverbed at the Revelstoke Dam, generating capacity has been increased by allowing water passing through the turbines to fall farther.

Cumulative energy obtained from all Resource Smart programs totalled 380 gigawatt-hours to March 1990.

---

### *Independent Power Producers*

Purchasing power from Independent Power Producers (IPP) represents a cooperative effort between B.C. Hydro and the private sector to provide new sources of electricity. We have received proposals involving energy provided by small-scale hydro, natural gas and woodwaste generating systems. These proposals have been evaluated in terms of technical, financial and environmental feasibility. During the year, agreements in principle were reached for two facilities with a total capacity of 160 megawatts.

### *Self-Generation / Load Displacement*

Self-Generation/Load Displacement encourages industrial customers to generate more of their own energy so that power previously consumed by them becomes available for use by others. A number of major industrial customers are already meeting some of their energy needs through self-generation. To assess the opportunities for self-generation, B.C. Hydro has asked for expressions of interest from major customers. During the year we entered into an agreement with a major pulp mill to assist them in developing a woodwaste-fired generating facility that will provide 700 gigawatt-hours of energy annually.

### OPERATING COSTS

Although operations, maintenance and administration expenses increased as we moved away from the restraint of the mid-1980s, our cost per unit of electricity produced continues to be one of the lowest in Canada. Operations, maintenance and administration expenses increased to 20 per cent of revenue in fiscal 1990 from 16 per cent in 1989. The increased costs result from our commitment to improving customer service and system reliability and reflect the enhancement of our investment in employees through training and development.

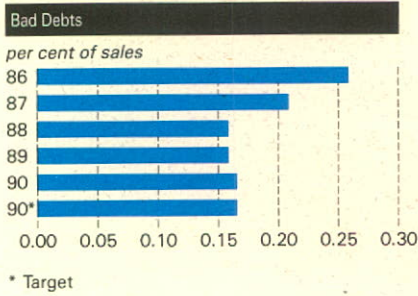
### STAFFING

B.C. Hydro is committed to providing employment security for all regular employees. In order to maintain this commitment, temporary staff and purchased services are used to meet peak and fluctuating work loads. At March 31, 1990, Hydro had 4904 regular employees and 857 temporary employees.

ASSET MANAGEMENT

*Bad Debt Expense*

Bad debt expense in 1990 was 0.17 per cent of billed sales, up slightly from 0.16 per cent in 1989. Since 1985, however, losses due to bad debts have decreased by 53 per cent.



*Inventory Turnover*

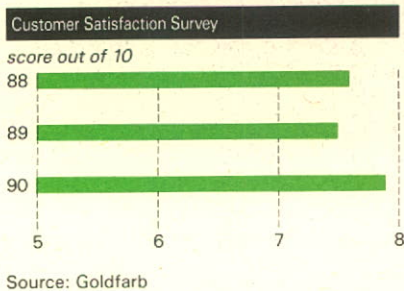
B.C. Hydro's inventory turnover for its main store for fiscal 1990 was 2.6, up 8.5 per cent from 1989. This improvement resulted from better communications and cooperation between

the districts, Material Management and Purchasing and Supply, and the use of automated systems.

**TO BE RECOGNIZED BY OUR CUSTOMERS AS A SUPERIOR MARKETING AND CUSTOMER SERVICE COMPANY.**

CUSTOMER SATISFACTION

B.C. Hydro's overall performance in providing customer satisfaction is measured through an independent annual survey. When compared to four other major public service organizations in the Province, Hydro received the highest service rating for the third successive year. In 1990,

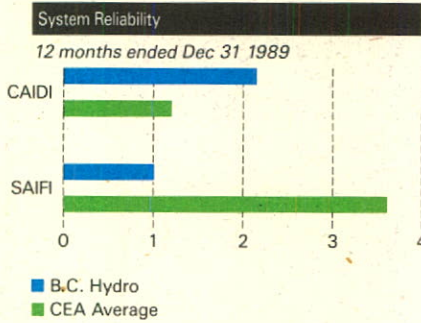


customers gave the corporation a score of 7.9 out of 10, up from 7.5 last year. Areas in which Hydro scored most favourably include providing reliable service, working quickly to restore customer interruptions, and doing a good job in forecasting demand.

We are working to further improve customer service by taking the lead in carrying out operations in an environmentally responsible manner while keeping electricity rates reasonable.

## DISTRIBUTION SYSTEM RELIABILITY

Distribution system reliability is measured using three Canadian Electrical Association (CEA) indices:



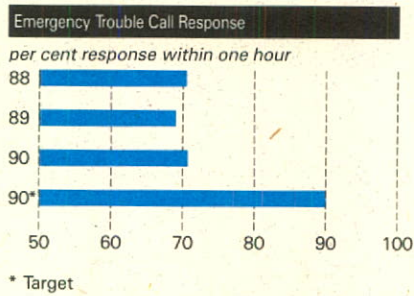
- The Average System Availability Index is the percentage of total time that power is available to customers. An average system availability of 99.975 was recorded in fiscal 1990, up from 99.970 the previous year and higher than the CEA average for 1989 of 99.951.

- The Customer Average Interruption Duration Index (CAIDI) indicates the average number of hours a customer is without power. During 1990, power outages lasted an average of 2.15 hours, an improvement of seven per cent from the previous year, compared to the CEA average for 1989 of 1.20 hours.

- The System Average Interruption Frequency Index (SAIFI) indicates the number of power outages per electric customer per year. There was an average of 1.01 power outages per customer in fiscal 1990, improved from 1.14 in 1989, both of which were significantly better than the CEA average for 1989 of 3.61.

## TROUBLE CALL RESPONSE

A critical indicator of customer service is how quickly B.C. Hydro responds to trouble calls. Performance is measured in two ways: emergency calls where public safety is at risk; and calls where public safety is not at risk.



During 1990, 71 per cent of emergency calls were responded to within one hour compared to 69 per cent in 1989. Hydro responded to

83 per cent of multi-customer non-emergency trouble calls within two hours, a decrease of two per cent from the previous year.



### TELEPHONE ENQUIRIES

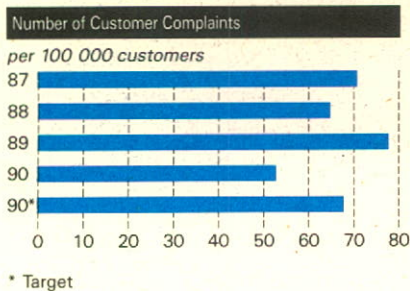
In the 1989 customer satisfaction survey, customers indicated that B.C. Hydro needed to improve the response time for telephone enquiries. In 1990, the Company focused on improving response time at the Lower Mainland Customer Enquiry Centre at Deer Lake, which handles over half the 1.5 million customer enquiries received each year. By March 1990, the Centre was responding to 90 per cent of all calls within 50 seconds.

### NEW SERVICE CONNECTIONS

During 1990, key performance indicators were developed to measure the time taken to complete inspections and install new service connections. Our objective is to minimize the time required for these important customer services. Since the implementation of the performance indicators early in fiscal 1990, we have completed 84 per cent of inspections within five working days and 87 per cent of new customer installations within 10 working days.

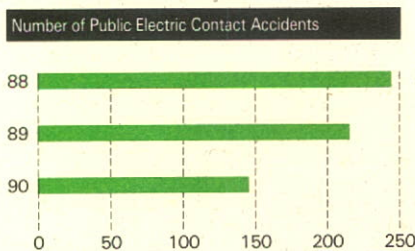
### CUSTOMER COMPLAINTS AND "BOUQUETS"

B.C. Hydro monitors the number of phone and written complaints and bouquets received by the Customer Services Group who deal directly with residential and general customers. Approximately 670 complaints were received in fiscal 1990, down 32 per cent from 1989. We also received 240 bouquets during 1990.



### PUBLIC SAFETY

Ensuring public safety when working with or around electricity is a critical corporate objective. Although our targets for reducing public electric contact accidents were surpassed in 1990, with 146 accidents compared to 216 last year, we consider any number to be too high. Emphasis was placed on increasing the level of public awareness of electrical hazards through publicity, school and training programs.



---

**TO BE ONE OF THE BEST EMPLOYERS IN BRITISH COLUMBIA.**

Recognizing that employees are our number one asset, B.C. Hydro is implementing a new Human Resources strategy. The focus of the strategy is on "Building Team 2000" through skills enhancement, empowerment and innovative approaches such as entering into partnerships with key stakeholders. This strategy has three key thrusts: Balancing the Workforce, Strengthening the Team, and Building the Culture.

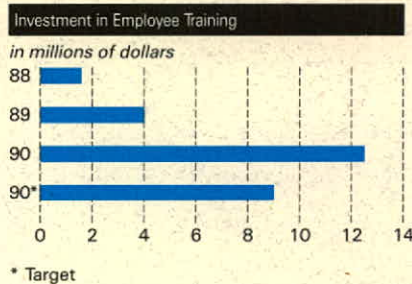
**BALANCING THE WORKFORCE**

To meet the challenge of a general shortage of skilled people from the traditional source of supply, B.C. Hydro is looking at new sources for qualified people. Through an effective employment equity program efforts have been made to increase the number of women in senior positions and non-traditional occupations. Hydro is also actively working with community and health groups to increase employment opportunities for disabled workers and other designated groups.

B.C. Hydro has an aging workforce and to ensure a smooth transfer of skills and knowledge from the current workforce to the next generation, Apprentice and Trainee programs have been expanded to provide opportunities for new and existing employees. Through a high profile recruitment campaign at various campuses and collaboration with educational institutions, Hydro plans to attract top candidates for these programs.

**STRENGTHENING THE TEAM**

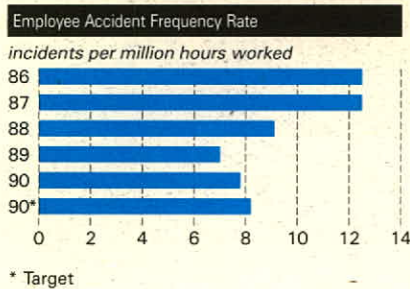
B.C. Hydro is continuing to strive for productivity improvements through people development, management skills enhancement, organizational restructuring and expanded use of information technology. A key initiative during fiscal 1990 was the introduction of Empowered Work Teams. By introducing this concept Hydro will achieve increased productivity, greater customer satisfaction and heightened employee commitment. The plan for the next year is to establish 100 Empowered Work Teams and explore team-based reward systems.



We also recognize the need for a multi-skilled, motivated and productive workforce and are committed to developing and upgrading the skills of employees. During fiscal 1990, almost \$13 million was spent on employee training which equates to six per cent of Hydro's payroll costs.

#### BUILDING THE CULTURE

The focus of this initiative is to develop and maintain a working climate which emphasizes corporate values and provides employees with the

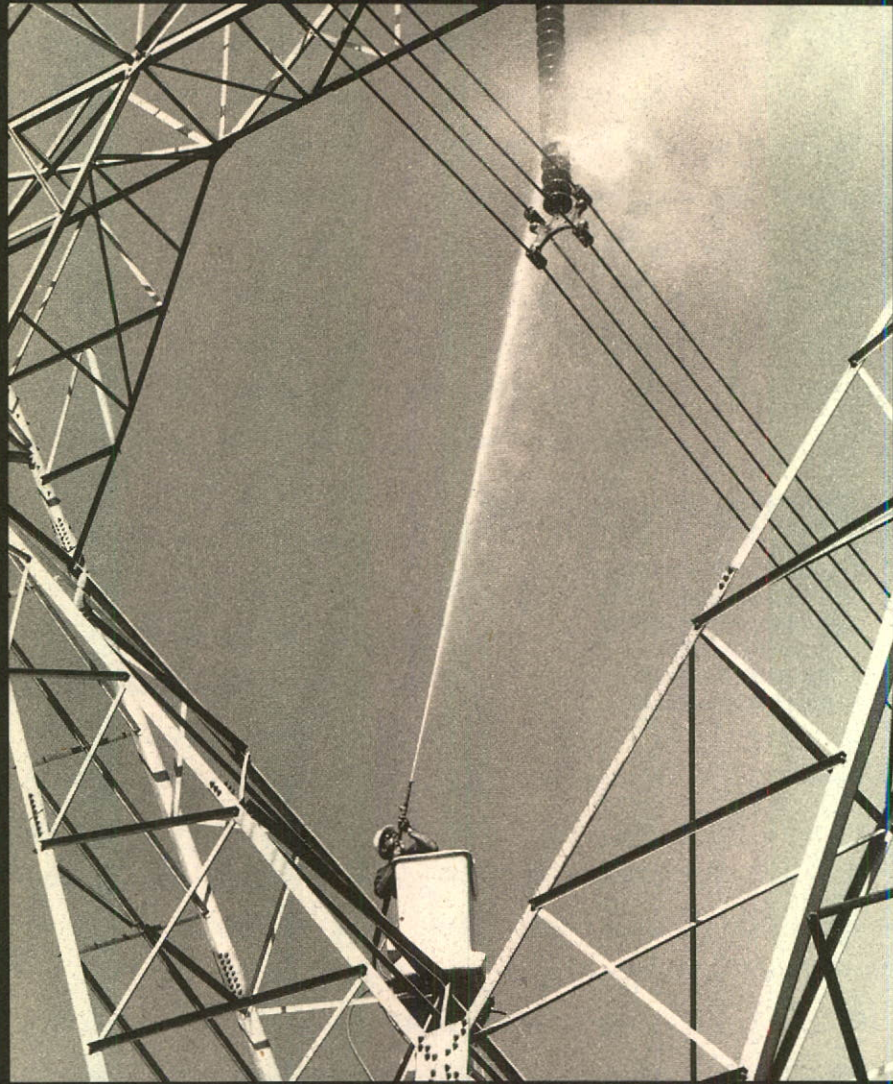


opportunity to achieve a well-balanced lifestyle. In addition, we will strive to have an informed workforce that is dedicated to the protection of our natural environment.

B.C. Hydro is committed to ongoing employee safety programs that are an integral part of job design, planning and execution. The employee accident frequency rate for the 12 months ending March 1990 was 7.8, up 11 per cent from 7.0 in 1989. However, employee accidents have declined 38 per cent since 1986.

#### COMPENSATION SURVEY

B.C. Hydro is working toward market comparability in employee compensation with an objective to be at par with our major customers. Results of a recent annual salary survey prepared by external consultants show that, on average, our compensation compares favourably with the community. As at December 31, 1989, Hydro's total cash compensation was two per cent above and overall, total compensation including benefits and time off was seven per cent above the average of major B.C. private sector employers.



*Boris Ziola, Lineman Sub-Foreman*

## **IMPROVING RESPONSIVENESS**

Innovative strategies in the areas of customer satisfaction, power quality and system reliability ensure the company continually improves its responsiveness to a changing marketplace.

A new live line insulator washing program on major 500 kv lines will reduce kickouts while eliminating the need for circuit outages to clean the insulators manually.

**SUMMARY**

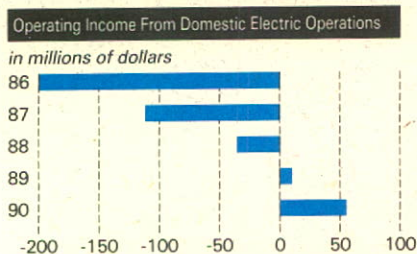
This year net income was the highest recorded in our 28-year history, with financial performance in most areas being better than the average for Canadian utilities. These results are tangible evidence of our commitment to supply electricity as efficiently as possible. Continued strong credit ratings also demonstrate the confidence of the major rating agencies in our credit worthiness and assist in lowering borrowing costs.

Our net income of \$160 million was boosted by a gain of \$41 million from the sale of the head office building in downtown Vancouver, and by income from export sales of \$64 million. The balance of \$55 million was from domestic operations.

Domestic operating income increased by \$45 million over last year. Although this was the second consecutive year of income following

seven years of losses, it is still significantly below the level of a decade ago. This is primarily due to three factors: lower "real" electricity rates, higher water rental costs and more assets in service.

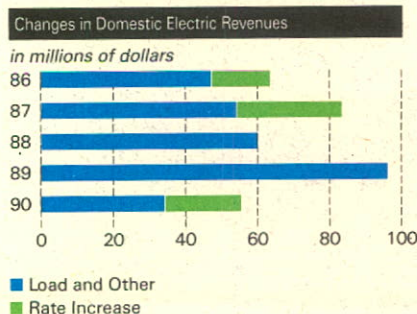
Higher domestic operating income in 1990 is the result of a \$46 million increase in revenues, reflecting the strong, broad-based economic growth in the province and a three per cent rate increase effective November 15, 1989. Operating costs increased principally because of catch-up and preventive maintenance programs and resource planning studies. These increases were offset by reduced finance charges resulting from our debt management program.



**RESULTS OF DOMESTIC OPERATIONS**

**REVENUES**

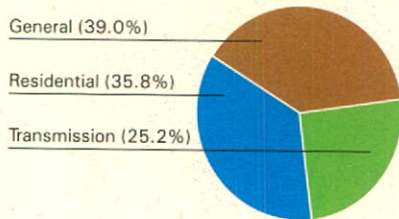
Total domestic electric revenues were \$1,706 million, compared to \$1,660 million in the previous year. Load growth accounted for \$41 million of this increase, while the rate increase contributed \$21 million. Decreases to both other revenues and recoveries under the Critical Industries Act offset this increase by \$16 million.



## RESIDENTIAL

Although 88 per cent of our customers are in the residential category, they account for only 28 per cent of domestic sales. New customers totalling 26 574, more than 2.5 per cent of our customer base, were

Domestic Revenues by Customer Class



added to the system during the year. However, residential sales volume increased by only one per cent, due partly to warmer weather compared to the previous year.

Residential growth was concentrated in the Lower Mainland and Vancouver Island where customers increased by three per cent.

## GENERAL AND COMMERCIAL

General and commercial revenues represent 12 per cent of our customers and 35 per cent of domestic sales. These revenues increased by three per cent over the previous year. Most of this increase is attributable to the service industry, the wholesale-retail trade sector and the real estate industry. Revenues from the large commercial sector have increased by two per cent, with 861 new customers, or five per cent, added during the year. The number of customers in the small commercial sector has grown by 3488, or 2.9 per cent, increasing revenues by \$6 million. These increases reflect the broad-based economic growth in the province.

## TRANSMISSION

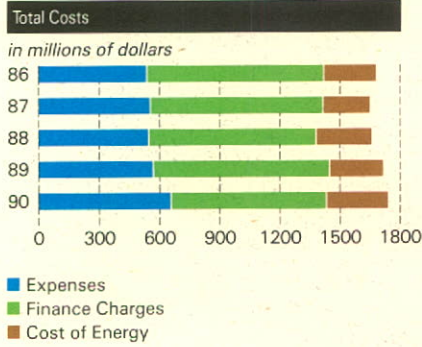
Transmission revenues, which represent 37 per cent of our sales volume, increased by five per cent, also as a result of the continued strong economic growth during the year. Revenues from the pulp and paper and chemical industries increased by nine per cent. However, demand from the mining sector decreased during the year due to a labour dispute at a major customer.

## OTHER REVENUES

Other revenues include miscellaneous energy sales of \$51 million, compared to \$50 million in 1989, and gains of \$13 million on surplus property sales, compared to gains of \$22 million in 1989.

## TOTAL COSTS

Our total cost of doing business is almost the same as last year despite a load growth of almost three per cent. This was achieved as increases in



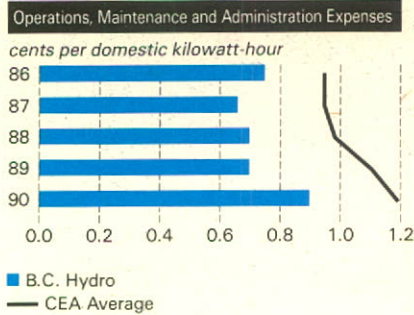
the cost of energy and expenses were offset by reduced finance charges. Costs are reported in three categories: cost of energy, expenses and finance charges.

## COST OF ENERGY

Cost of energy comprises water rentals levied by the Province on the use of water in the generation of hydroelectricity, amortization of deferred energy costs, and fuel purchased for non-integrated generation. During the year, water rentals on current generation totalled \$196 million, representing the largest component of the cost of energy.

## EXPENSES

While most of our energy is produced in northern and south central B.C., the majority is consumed in the Lower Mainland and Vancouver



Island regions. As a result, we have a significant investment in transmission facilities to ensure the effective and efficient delivery of electricity. The costs related to these facilities are a major part of our operations, maintenance and administration expenses.

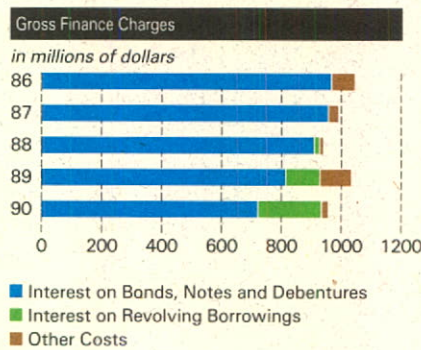
Operations, maintenance and administration expenses for the year increased by \$81 million over the previous year to \$350 million. Spending on catch-up maintenance at generating stations and on emergency repairs accounted for \$31 million of this increase. Costs were also incurred to improve a number of customer services, including response times to trouble calls and telephone enquiries. In addition, \$11 million was spent on resource planning studies required for the possible future development of facilities.

Labour negotiations were completed during fiscal 1990 with all unionized employees. These settlements cover a two-year period and resulted in a six per cent increase in our compensation costs. In addition, we have invested almost \$13 million on employee training and development programs.

Taxes increased by \$22 million over the previous year. Most of this increase is attributable to higher assessment values, increased school tax rates and the inclusion of previously exempt hydroelectric generating facilities in the tax assessment base.

#### FINANCE CHARGES

Finance charges comprise interest expense on debt, reduced by interest income from sinking funds and temporary investments.



Finance charges of \$768 million were \$104 million, or 12 per cent, lower than last year. This saving reflects the benefits of our debt management program, principally the reduction of debt in fiscal 1989. Improved foreign exchange rates also contributed to the decrease in finance costs. Offsetting these savings were increased finance charges resulting from a higher volume

of revolving borrowings and higher average interest rates.

Our exposure to foreign exchange fluctuation has continued to drop as a result of a U.S. \$304 million reduction in U.S. debt. Unrealized foreign exchange losses on long-term U.S. debt, net of sinking funds, were \$59 million as at March 31, 1990 compared to \$700 million five years ago. In addition, a one cent change in the value of the Canadian dollar now impacts debt owing by \$18 million, compared to \$70 million at March 31, 1985.

#### RESULTS OF EXPORT OPERATIONS

Total trade revenues of \$115 million were up five per cent over the previous year. While the volume of sales was down by 24 per cent from 1989, average prices were up by 38 per cent. Decreased margins available from brokered energy were the main reason net income dropped by 30 per cent from 1989. After including transfers from the rate stabilization account of \$23 million, net stabilized income was \$64 million.



## CAPITAL EXPENDITURES

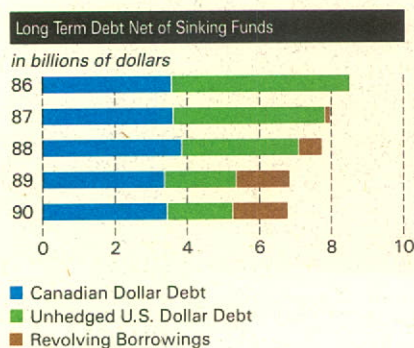
Capital expenditures increased by \$136 million in fiscal 1990 to \$346 million from \$210 million in 1989. Spending of \$134 million, a \$32 million increase, was required to meet customer growth on the distribution system. Expansion of transmission facilities included \$14 million this year to include Stewart, B.C. as part of the integrated system. Expenditures were also made to enhance our facilities, develop new computer systems and to commence the new head office building project.

## DEBT MANAGEMENT

Our current debt to equity ratio of 80:20 is considered appropriate by our lenders and regulators. It is our objective to maintain, if not improve, this ratio. Minimization of foreign currency risk, improved management of sinking funds and reduced debt servicing costs are our three main financing strategies.

### DEBT OUTSTANDING

After reaching a peak of \$8.6 billion in 1985, debt has been reduced to \$6.7 billion. The level of debt was stable this year with a small reduction



of \$47 million compared to a total reduction of \$1.3 billion over the last three years. This reduction has been achieved by the repayment of debt with cash flow from operations, the financing of capital expenditures from internal cash flow, proceeds from the sale of the head office building and the improvement in the value of the Canadian dollar. Although expenditures on fixed

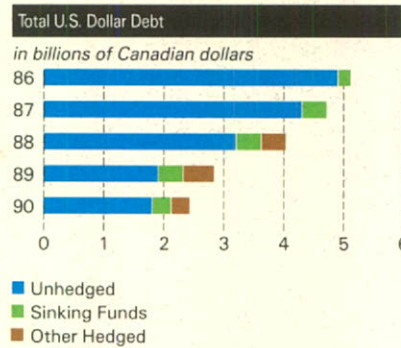
assets increased in 1990, they were exceeded by funds provided from operations. Consequently, no additional financing was required.

### DEBT COMPOSITION CHANGES

During the year the net amount of short-term debt held under our revolving borrowing facility increased by \$42 million. Using a revolving borrowing facility allows us to maintain financing flexibility while managing interest rates to minimize long-term borrowing costs and avoid locking into high long-term interest rates.

## REDUCED CURRENCY EXPOSURE

Historically, a significant portion of our debt has been in U.S. dollars, reaching a peak in 1985 at U.S. \$3,742 million, or 58 per cent of total debt. Since then we have sought to reduce our U.S. debt and exposure



to fluctuations in the U.S. dollar with respect to the Canadian dollar. This has been achieved by a program of principal and sinking fund payments, debt repurchases, debt defeasance and the purchase of forward foreign exchange contracts.

As at March 31, 1990 our net U.S. debt was U.S. \$1,692 million, or 30 per cent of total debt.

Of this amount, U.S. \$124 million of debt and future sinking fund instalments was hedged with forward exchange contracts, further reducing exposure to exchange rate changes. As a result, our net foreign exchange exposure on debt as at March 31, 1990 was U.S. \$1,568 million, a decrease of U.S. \$39 million from 1989.

## DISTRIBUTION TO THE PROVINCE

In November 1988, the Province provided \$235 million of term cumulative preferred funding to B.C. Hydro redeemable in November 2008. The Province is entitled to annual, cumulative distributions on the funding. During the year, \$11 million was declared and paid to the Province for the year ended March 31, 1989. A further \$29 million was declared for fiscal 1990.

Under an Order-in-Council dated October 5, 1989, we are required to make an annual general distribution to the Province from our distributable surplus. For the year ended March 31, 1990, the Order required B.C. Hydro to make a payment of \$130 million. This payment is comprised of the distribution declared on the preferred funding of \$29 million and a general distribution of \$101 million. For fiscal years subsequent to 1990 the distribution will be based on a percentage of net income for the year which will vary depending on our debt to equity ratio.

## REGULATION AND FINANCIAL RATIOS

B.C. Hydro's operations, including electric rates, are regulated by the British Columbia Utilities Commission, subject to any general or special direction of the Lieutenant-Governor in Council with respect to the exercise of its powers.

### RATE STABILIZATION

On April 30, 1990, the Commission directed B.C. Hydro to discontinue the use of the rate stabilization account derived from export sales. The balance in the account of \$64 million was transferred to income in fiscal 1990.

The Commission has directed B.C. Hydro to create a new rate stabilization account effective April 1, 1990. All net income in excess of a required interest coverage ratio of 1.3:1 is to be credited to this account annually.

## FINANCIAL RATIOS

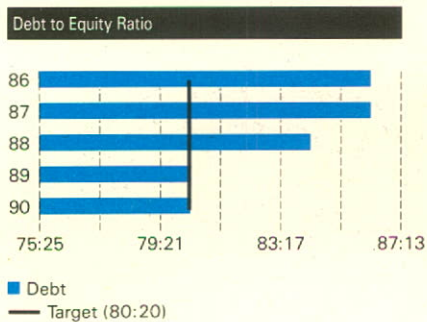
A special direction issued in March 1984 stated that we should improve our interest coverage ratio to 1.3:1 by fiscal 1991. The special direction also required that we maintain this interest coverage ratio after fiscal 1991 so as to achieve and maintain a debt to equity ratio of 80:20.

### DEBT TO EQUITY RATIO

The debt to equity ratio is an indication of financial strength. Achieving and maintaining an appropriate ratio improves our credit rating with a consequent benefit to our cost of borrowing.

We calculate our debt to equity ratio according to the requirements of the Commission. Debt comprises long-term debt less temporary investments. Equity includes retained earnings, preferred funding and deferred credits.

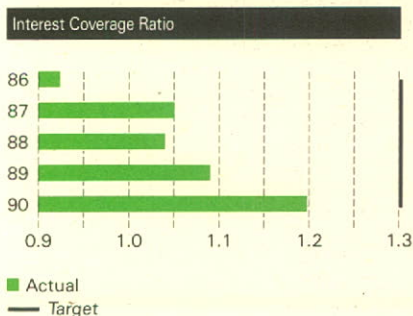
In 1990 we maintained a debt to equity ratio of 80:20, achieved for the first time in 1989.



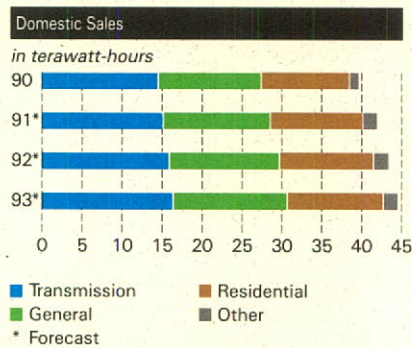
### INTEREST COVERAGE RATIO

The interest coverage ratio is also an indicator of our financial strength and of our ability to meet interest payments out of operating income.

Our 1990 interest coverage ratio of 1.20:1 is the highest achieved since the financing of the Revelstoke Dam, rising from 1.09:1 in 1989. However, this is still below the 1.3:1 required by the Commission.



We have developed a detailed business and financial plan for the next three years which supports our four corporate objectives. The plan builds on our strong financial performance to meet the challenges of the 1990s and focuses on three areas:



**MAINTAINING A BALANCED APPROACH TO DEVELOPMENT**

Numerous environmental programs and initiatives are being implemented throughout B.C. Hydro. These include waste management programs and land and social resources initiatives.

Our energy strategies are designed to balance the province's growing energy needs with the environmental and financial impact of new generation facilities. Alternative energy supply and demand options are being pursued. Four key initiatives are Power Smart, Resource Smart, Independent Power Producers and Self-Generation/Load Displacement. We will also promote energy conservation with our pricing strategy.

**IMPROVING RESPONSIVENESS TO THE MARKETPLACE**

The purpose of our marketing initiatives is to develop and maintain superior customer service. Specific programs and action plans address four major components of quality customer service: public safety, system reliability, responsiveness to customers and power quality.

System reliability is critical to providing quality customer service. As preventive maintenance has a direct impact on system reliability, we have developed a strategy which focuses on major overhauls, backlogged maintenance and our regular, ongoing work.

**INCREASING CORPORATE EFFICIENCY**

Initiatives aimed at improving corporate efficiency include strategies that focus on marketing, human resource development, information technology, finance and the workplace.

A proposed wheeling policy, the continued decentralization of operations, and the further development of subsidiaries are examples of our commitment to respond to the competitive pressures of the marketplace.

The focus of B.C. Hydro's human resource planning will be careful implementation of "Building Team 2000" through skill enhancement and empowerment. We expect that Empowered Work Teams will have a significant impact on the way we conduct our business and the teams will cooperate to create a dynamic, flexible and adaptable organization ready to meet the rapidly changing business environment.

Major information systems aimed at improving customer service and increasing the efficiency and effectiveness of our operations are being developed. These include the Geographic Facilities Information System, the Customer Information System, and the Meter Reading Management System.

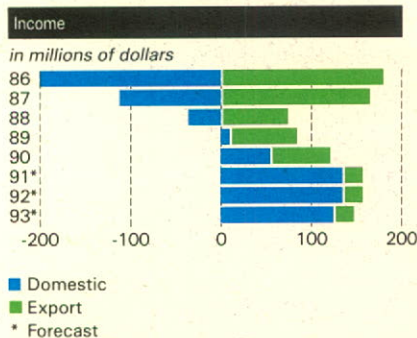
Improving the working environment and related office facilities will help maximize the use of corporate assets and enhance operational and organizational efficiency. Other key initiatives in improving asset utilization are the continued divestiture of surplus property and the implementation of a new materials management system and an advance billing plan.

Innovative strategies are being undertaken to manage the costs and risks associated with our debt portfolio. Our liability management program focuses on reducing debt levels and our exposure to foreign exchange fluctuations.

**FINANCIAL PLAN**

**SUMMARY**

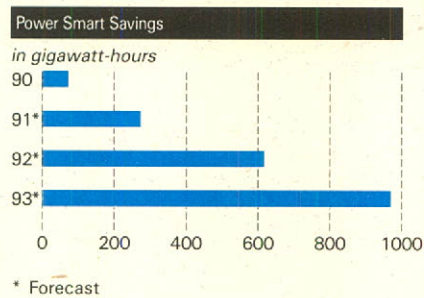
The key to the success of our three-year financial plan is improving our performance and managing the level of operations, maintenance and



administration expenses. These expenditures are now at appropriate levels and, during the plan years, emphasis will be placed on increasing productivity while ensuring cost effectiveness and control. In addition, focusing on a steady-state level of system maintenance and limiting the growth in the number of regular staff will provide flexibility in planning future expenditures.

## REVENUES

Revenues from domestic sales are expected to increase by 7.6 per cent in fiscal 1991 primarily due to forecast growth in electricity demand and



the November 15, 1989 and April 1, 1990 rate increases. For fiscal years 1992 and 1993, domestic revenue increases are expected to slow to 4.1 and 3.4 per cent respectively. These increases reflect planned rate increases and a slower growth in electricity demand due to an expected slowdown in the economy and the impact of our

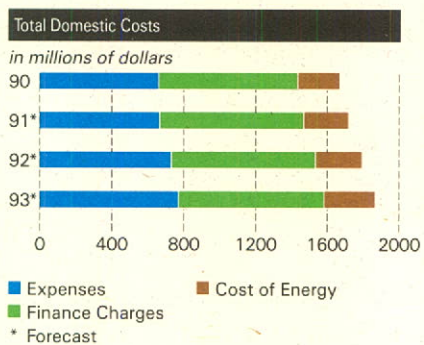
Power Smart programs. By fiscal 1993, Power Smart programs are expected to reduce annual revenues by \$40 million.

## COST OF ENERGY

Cost of energy on domestic sales is expected to increase at an average annual rate of seven per cent over the next three years, primarily due to higher water rentals. Water rentals paid to the Province will be subject to annual indexing starting January 1, 1991.

## EXPENSES

Total expenses, excluding finance charges, are forecast to decrease before inflation by about four per cent in 1991 and then increase by an



average of two per cent in the following two years. The decrease in costs in 1991 is attributable to a number of non-recurring costs that were incurred in 1990. Considerable emphasis will be placed on controlling operations, maintenance and administration costs so that these costs increase at a slower rate than the increase in customer demand.

Taxes are expected to remain stable for fiscal 1991 and then increase by 10 per cent in fiscal 1992. Depreciation will increase gradually over the plan period as a result of additional fixed asset expenditures and the amortization of Power Smart program costs.

### FINANCE CHARGES

Finance charges are expected to increase by \$27 million to \$795 million in 1991. This increase is primarily due to a projected rise in short-term borrowing rates and higher capital expenditure levels. Although interest rates are expected to decline after 1991, finance charges are forecast to remain approximately the same for fiscal 1992 and 1993 due to the growth in capital expenditures and a projected decline in the value of the Canadian dollar.

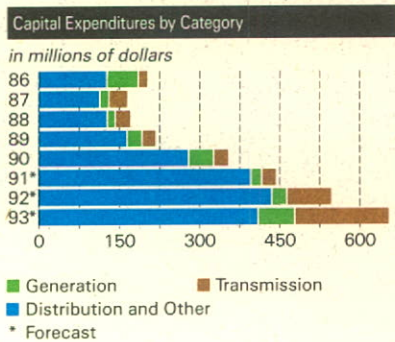
### NET TRADE INCOME

Income from trade in electricity is projected to be \$20 million for each of the three plan years.

### NET INCOME

Net income is forecast to remain level at \$155 million in fiscal 1991 and 1992 and decrease to \$145 million in 1993. At these income levels, projected distributions to the Province for the three years are \$105 million, \$97 million and \$94 million, respectively.

### CAPITAL EXPENDITURES



Capital expenditures are expected to be \$435 million in 1991, \$539 million in 1992 and \$647 million in 1993. The major components are an increased level of customer-driven system additions, increased dam safety rehabilitation work, acceleration of the Resource Smart programs, and specific expenditures to develop new facilities and information systems.

In addition, we expect to spend \$124 million on Power Smart programs over the next three years.

### FINANCIAL RATIOS

Our current debt to equity ratio of 80:20 will remain unchanged through to fiscal 1993. The target ratio of 80:20 is expected to be achieved after allowing for the payment of \$296 million in distributions to the Province over the three-year period.

The interest coverage ratio is expected to decline from 1.20:1 in 1990 to 1.17:1 in 1991, 1.16:1 in 1992 and 1.15:1 in 1993.



*Donna Donnan, Apprentice and Ron McCourt, Operator / Area Dispatcher*

## **INCREASING EFFICIENCY**

Increasing corporate efficiency focuses on human resource development, technology, exposure to competitive marketplace forces and sound financial management practices.

Human resource development emphasizes developing the skills, knowledge and attitudes of our people to help us meet the employment challenges of the future.



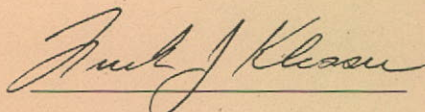
**MANAGEMENT REPORT**

The consolidated financial statements of B.C. Hydro have been prepared by management in accordance with accounting principles generally accepted in Canada, consistently applied and appropriate in the circumstances, after taking into account the changes described in Note 2 to the financial statements. Because a precise determination of many assets and liabilities is dependent upon future events, the preparation of periodic financial statements necessarily involves the use of estimates and approximations which have been made using careful judgement. The financial statements have, in management's opinion, been properly prepared within reasonable limits of materiality and within the framework of the accounting policies summarized in the notes to the financial statements. The financial statements have also been reviewed by the Audit Committee and approved by the Board of Directors. Financial information presented elsewhere in this Annual Report is consistent with that in the financial statements.

Management depends upon a system of internal controls in order to provide reasonable assurance, on a cost-effective basis, that financial information is reliable and accurate. This system includes formal written policies and procedures, the careful selection and training of qualified personnel, and an organizational structure that provides for the appropriate delegation of authority and segregation of responsibilities. This system is monitored through the performance of a comprehensive internal audit program. Our external auditors also independently perform such tests of the system of internal controls as they consider necessary for the purpose of expressing their opinion on the financial statements. The Audit Committee, which is comprised of directors who are not employees, meets regularly with representatives of the external auditors, the internal auditors and management in order to satisfy themselves that B.C. Hydro's system of internal controls is functioning properly.



L.I. (Larry) Bell  
*Chairman*



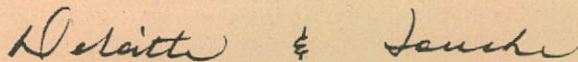
Frank J. Klassen  
*Vice-President, Finance and Administration*

**REPORT OF THE AUDITORS**

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

We have examined the consolidated balance sheets of British Columbia Hydro and Power Authority as at March 31, 1990 and 1989 and the consolidated statements of operations, retained earnings and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of British Columbia Hydro and Power Authority as at March 31, 1990 and 1989 and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles applied, except for the changes, with which we concur, in the methods of accounting for the cost of energy and extraordinary items as explained in Note 2 to the consolidated financial statements, on a consistent basis.



Chartered Accountants  
Vancouver, British Columbia  
May 25, 1990

**CONSOLIDATED STATEMENTS OF OPERATIONS***(in millions)**for the years ended March 31*

	1990			1989		
	Domestic	Export	Total	Domestic	Export	Total
REVENUES (Note 3)						
Residential	\$ 598	\$ —	\$ 598	\$ 588	\$ —	\$ 588
General	599	—	599	579	—	579
Transmission	420	—	420	397	—	397
Other	89	115	204	96	109	205
	1,706	115	1,821	1,660	109	1,769
Cost of Energy (Note 4)	229	74	303	212	52	264
GROSS MARGIN	1,477	41	1,518	1,448	57	1,505
EXPENSES						
Operations, maintenance and administration	350	—	350	269	—	269
Taxes	102	—	102	80	—	80
Depreciation	202	—	202	217	—	217
	654	—	654	566	—	566
OPERATING INCOME BEFORE FINANCE CHARGES	823	41	864	882	57	939
Finance charges (Note 5)	768	—	768	872	—	872
OPERATING INCOME	55	41	96	10	57	67
Net rate stabilization transfers (Note 6)	—	23	23	—	15	15
INCOME AFTER RATE STABILIZATION	\$ 55	\$ 64	119	\$ 10	\$ 72	82
Other income (Note 7)			41			4
NET INCOME			\$ 160			\$ 86

*Certain 1989 figures have been reclassified to conform with the presentation used for 1990.*

**CONSOLIDATED STATEMENTS OF RETAINED EARNINGS***(in millions)*

<i>for the years ended March 31</i>	1990	1989
Balance at beginning of year	\$ 681	\$ 595
Net income	160	86
	<u>841</u>	<u>681</u>
Less: Distributions to the Province (Note 8)		
Distribution on preferred funds - 1989	11	—
Distribution on preferred funds - 1990	29	—
General distribution	101	—
	<u>141</u>	<u>—</u>
Balance at end of year	<u>\$ 700</u>	<u>\$ 681</u>

**CONSOLIDATED BALANCE SHEETS***(in millions)*

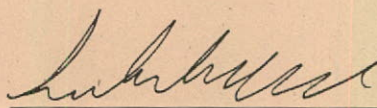
<i>as at March 31</i>	1990	1989
<b>ASSETS</b>		
FIXED ASSETS (Note 9)		
Fixed assets in service	\$ 10,822	\$ 10,608
Less accumulated depreciation	2,730	2,520
	<u>8,092</u>	<u>8,088</u>
Unfinished construction	253	157
	<u>8,345</u>	<u>8,245</u>
CURRENT ASSETS		
Temporary investments	207	71
Accounts receivable and unbilled revenues	293	311
Materials and supplies	45	40
Prepaid expenses	4	47
Property held for sale	15	25
	<u>564</u>	<u>494</u>
DEFERRED CHARGES		
Foreign currency translation	59	114
Debt discount and issue costs	35	42
Deferred energy costs	30	—
Power Smart programs	16	3
	<u>140</u>	<u>159</u>
	<u>\$ 9,049</u>	<u>\$ 8,898</u>
<b>LIABILITIES AND EQUITY</b>		
LONG-TERM DEBT (Note 10)	\$ 6,727	\$ 6,774
CURRENT LIABILITIES		
Accounts payable	243	184
Accrued interest	272	290
Distributions payable to the Province (Note 8)	130	—
	<u>645</u>	<u>474</u>
DEFERRED CREDITS		
Rate stabilization account (Note 6)	—	23
Deferred revenue	46	33
Contributions arising from the Columbia River Treaty	323	332
Contributions in aid of construction	373	346
	<u>742</u>	<u>734</u>
PREFERRED FUNDING (Note 8)	235	235
RETAINED EARNINGS	700	681
	<u>\$ 9,049</u>	<u>\$ 8,898</u>

*Certain 1989 figures have been reclassified to conform with the presentation used for 1990.*

APPROVED ON BEHALF OF THE BOARD:



L.I. (Larry) Bell  
Chairman



Sandra D. Sutherland, Q.C.  
Director

**CONSOLIDATED STATEMENTS OF CHANGES IN FINANCIAL POSITION***(in millions)**for the years ended March 31*

	1990	1989
<b>OPERATING ACTIVITIES</b>		
Operating income	\$ 96	\$ 67
Depreciation	212	225
Other non-cash items	(39)	62
	<u>269</u>	<u>354</u>
Working capital changes	231	(102)
Distributions to the Province	(141)	—
Funds provided from discontinued operations	—	14
	<u>359</u>	<u>266</u>
<b>INVESTING ACTIVITIES</b>		
Fixed asset expenditures	(346)	(210)
Contributions in aid of construction	40	25
Net proceeds from property sales	72	33
	<u>(234)</u>	<u>(152)</u>
<b>FINANCING ACTIVITIES</b>		
Bonds, notes and debentures		
- issued	777	94
- retired	(771)	(1,406)
Revolving borrowings	42	845
Sinking fund changes	(37)	(101)
Preferred funding	—	235
	<u>11</u>	<u>(333)</u>
FUNDS FROM SALE OF BUSINESSES (Note 11)	—	193
<b>INCREASE (DECREASE) IN FUNDS</b>	<b>136</b>	<b>(26)</b>
<b>FUNDS AT BEGINNING OF YEAR</b>	<b>71</b>	<b>97</b>
<b>FUNDS AT END OF YEAR</b>	<b>\$ 207</b>	<b>\$ 71</b>

*Funds at beginning and end of year consist of temporary investments.*

*Certain 1989 figures have been reclassified to conform with the presentation used for 1990.*

**NOTES TO CONSOLIDATED  
FINANCIAL STATEMENTS**

*(tabular amounts expressed in millions of dollars unless otherwise stated)*

**NOTE 1 SIGNIFICANT ACCOUNTING POLICIES**

British Columbia Hydro and Power Authority ("B.C. Hydro") is a Crown corporation of the Province of British Columbia (the "Province"). B.C. Hydro is regulated by the British Columbia Utilities Commission (the "Commission"). The accounting policies of B.C. Hydro conform to accounting principles generally accepted in Canada. A description of the significant accounting policies follows. See Note 6 for an explanation of the Rate Stabilization Account.

**CONSOLIDATION**

The consolidated financial statements include the financial statements of B.C. Hydro and all of its subsidiary companies. Principal subsidiaries of the company, all of which are wholly-owned, are Powertech Labs Inc., Western Integrated Technologies Inc., Westech Information Systems Inc., British Columbia Power Export Corporation, British Columbia Hydro International Limited and Columbia Estate Company, Limited.

**REVENUES**

Domestic revenues represent sales of energy to customers within the Province and sales of firm energy to those outside the Province (mainly Seattle and Point Roberts, Washington and Hyder, Alaska) with whom B.C. Hydro has long-term commitments.

Export revenues are derived from energy sales made outside the Province other than those classified as domestic. These sales are surplus to B.C. Hydro's domestic energy requirements.

Customers are billed on a cyclical basis for energy deliveries with unbilled deliveries being accrued and included in revenues.

**FIXED ASSETS**

Fixed assets in service consist principally of land, water rights, storage dams and plant for the generation, transmission and distribution of electricity, and include the cost of plant financed by contributions in aid of construction and contributions arising from the Columbia River Treaty.

Fixed assets are carried at cost which includes materials, direct labour and appropriate portions of engineering, administration and finance charges.

The costs of any capital development studies which are deferred for more than one year are amortized on a straight-line basis at 20% per annum during the deferral period. Capital projects which are deferred, but for which there is a reasonable probability of proceeding, have a provision made for any reduction in the value of project costs. The costs of capital development studies and capital projects which are abandoned or subject to indefinite postponement are written off.

**DEPRECIATION**

Depreciation is provided on all depreciable assets in service as at the beginning of each year based on the average service life of the assets and is computed using the straight-line method.

**FINANCE CHARGES CAPITALIZED**

B.C. Hydro capitalizes finance charges at rates equivalent to the cost of borrowing those funds expended on construction projects during each year of construction.

**TEMPORARY INVESTMENTS**

Temporary investments are valued at the lower of cost and market.

**MATERIALS AND SUPPLIES**

Materials and supplies are valued at average cost, less provisions for decline in value.

**PROPERTY HELD FOR SALE**

Property held for sale is valued at the lower of cost and net estimated realizable value.

**FOREIGN CURRENCY TRANSLATION**

Long-term debt, sinking funds, current assets and current liabilities denominated in a foreign currency which are not hedged are translated into Canadian currency at the rate of exchange prevailing at the balance sheet date. U.S. currency liabilities which are hedged are converted at the rate established by the terms of the hedge instrument.

**NOTE 1 SIGNIFICANT ACCOUNTING POLICIES (cont.)**

Unrealized gains and losses arising from the translation of long-term debt and sinking funds are deferred and amortized over the remaining term of the debt. The annual amortization is determined using a sum-of-the-digits method, except that for the last four years the unamortized balance is written off on a straight-line basis. Foreign exchange gains and losses on current assets and current liabilities are included in income.

**DEBT DISCOUNT AND ISSUE COSTS**

Discount and issue costs on bonds, notes and debentures are amortized on a straight-line basis over the term of the respective debt.

**DEFERRED COST OF ENERGY**

Energy generation and purchase requirements are determined based on long-term system supply and demand projections. In any year, water flow conditions and weather patterns, which are outside the control of B.C. Hydro, may result in the acquisition of energy to meet energy requirements. The cost of energy acquired for the integrated system, including the cost of the Burrard Thermal Generating Plant, is recorded in the deferred cost of energy account. These costs are accumulated on a pooled basis and charged against export sales. Any residual balance is amortized to domestic cost of energy over a twelve month period.

**POWER SMART PROGRAMS**

Expenditures on Power Smart programs for energy conservation include materials, direct labour and applicable portions of administration charges, equipment costs, program advertising and incentives in the form of rebates, grants and the interest on interest-free loans. These expenditures are deferred and amortized on a straight-line basis over seven years, except for certain initial costs which are expensed.

**DEFERRED REVENUE**

Deferred revenue consists of amounts received under the Skagit River Agreements. These amounts are deferred and included in income on an annuity basis over the energy delivery period ending in fiscal 2066.

**CONTRIBUTIONS**

Contributions in aid of construction are amounts received from certain customers toward the costs of the extension of services. These amounts are amortized over the estimated service lives of the related assets at an amount equal to the corresponding annual provision for depreciation. Contributions received in respect of unfinished construction are not amortized until the assets are placed in service.

Contributions arising from the Columbia River Treaty are amortized over the period ending in fiscal 2025, the minimum term of the Treaty, at an amount equal to the corresponding annual provision for depreciation of the related assets.

**PENSION COSTS**

The costs of pension benefits for employee services for the year, determined on an actuarial basis in accordance with the terms of the pension plan agreement, are included in pension expense. Pension expense also includes amortization of the cost of past service benefits, experience gains and losses, and the initial net pension surplus existing in 1987 when the current accounting policy for pension costs was introduced. Amortization is on a straight-line basis over the expected average remaining service life of pension plan members. Pension fund investments are valued at market value.

**NOTE 2 CHANGES IN ACCOUNTING POLICIES**

Effective April 1, 1989, B.C. Hydro changed, on a prospective basis, its method of accounting for the cost of acquired energy. The cost of energy acquired by B.C. Hydro for the integrated system is now recorded in a deferred cost of energy account, on a pooled basis, and charged against export sales. Any residual balance is amortized to domestic cost of energy over a twelve month period. Prior to April 1, 1989, the cost of acquired energy was expensed on acquisition.

If this new policy had been applied on a retroactive basis, the impact on net income for the year ended March 31, 1989 would have been immaterial.

Effective April 1, 1989, B.C. Hydro also adopted, on a prospective basis, the revised accounting recommendations of the Canadian Institute of Chartered Accountants dated December 1989 with respect to extraordinary items. Accordingly, B.C. Hydro has accounted for the net gain of \$41 million on the sale of its head office building during the year ended March 31, 1990 as other income rather than as an extraordinary item.

**NOTE 3 RATE PROCEEDINGS**

An interim rate increase of 3.0% which had been in effect since November 15, 1989 was confirmed by the Commission in a decision dated May 25, 1990. Two further rate increases of 1.5% effective April 1, 1990 and April 1, 1991 were approved by the Commission in a decision dated April 30, 1990.

**NOTE 4 COST OF ENERGY**

	1990			1989		
	Domestic	Export	Total	Domestic	Export	Total
Water rentals	\$ 196	\$ —	\$ 196	\$ 197	\$ 14	\$ 211
Amortization of deferred energy costs	24	—	24	—	—	—
Purchased power	8	65	73	14	30	44
Transmission charges	1	9	10	1	8	9
	<u>\$ 229</u>	<u>\$ 74</u>	<u>\$ 303</u>	<u>\$ 212</u>	<u>\$ 52</u>	<u>\$ 264</u>

Water rentals are amounts levied by the Province on the use of water in hydroelectric generation. Transmission charges are paid to other utilities for the use of their transmission lines.

In order to provide security of service to domestic customers, B.C. Hydro purchases energy from third parties and operates the Burrard Thermal Generating Plant based on long-term system supply and demand forecasts. The nature of the B.C. Hydro system can result in situations where surplus water is available. This surplus may be exported on an "as available" basis as secondary hydroelectric power. In the determination of cost of energy the highest marginal cost is charged to these export sales.

**NOTE 5 FINANCE CHARGES**

	1990	1989
Interest on bonds, notes and debentures	\$ 720	\$ 827
Interest on revolving borrowings	207	109
Amortization of deferred charges:		
Foreign exchange gains and losses	1	9
Debt discount and issue costs	4	7
Debt management program (Note 10)	5	80
Other	7	6
	<u>944</u>	<u>1,038</u>
Less: Income from sinking fund investments	111	113
Income from temporary investments	25	7
Income from term debenture	32	27
Allocated to discontinued operations	—	15
	<u>168</u>	<u>162</u>
	<u>776</u>	<u>876</u>
Less: Finance charges capitalized	8	4
	<u>\$ 768</u>	<u>\$ 872</u>

The effective rate for finance charges capitalized to unfinished construction for fiscal 1990 was 11.6% (1989 - 10.0%).

**NOTE 6 RATE STABILIZATION ACCOUNT**

In 1982, the Commission directed B.C. Hydro to create a rate stabilization account derived from export sales of surplus electric energy (exclusive of sales made under certain export contracts) less associated direct expenses.

In fiscal 1989, \$57 million from export sales of surplus energy less associated direct expenses was transferred to the account and \$72 million was transferred from the account to income in accordance with a directive from the Commission.

On April 30, 1990, the Commission rescinded its 1982 directive regarding the rate stabilization account and ordered that any balance in the account be transferred to income. Consequently, for fiscal 1990 the balance in the account has been transferred to income.



**NOTE 7 OTHER INCOME**

During the year B.C. Hydro sold its head office building for proceeds of \$56 million. After deducting the book value of the building and associated selling costs the net gain was \$41 million, which has been included as other income. Other income for 1989 of \$4 million represents income from the non-electric businesses sold by B.C. Hydro to the private sector in fiscal 1989 (as described in Note 11).

**NOTE 8 DISTRIBUTIONS TO THE PROVINCE**

In November 1988, the Province provided \$235 million of term cumulative preferred funding to B.C. Hydro. The preferred funding is redeemable in November 2008. The Province is entitled to an annual distribution that approximates market borrowing rates on the preferred funding. Payments of the annual distribution, which are cumulative, may be deferred in any year by the Board of Directors of B.C. Hydro. During fiscal 1990, an \$11 million distribution was declared and paid by B.C. Hydro to the Province in respect of the year ended March 31, 1989. A further \$29 million distribution on the preferred funding was declared and accrued in respect of the year ended March 31, 1990.

Under an Order in Council (the "Order") dated October 5, 1989, B.C. Hydro is required to make an annual total distribution to the Province. This distribution is to be confirmed, on or before June 30 following each fiscal year-end, by the Board of Directors of B.C. Hydro and is to be determined, for fiscal years subsequent to the year ending March 31, 1990, as follows:

- The distribution will be nil when debt as a percentage of debt plus equity (the "debt/equity ratio") is greater than 80%;
- The distribution will be equal to 75% of distributable surplus when the debt/equity ratio is between 75% and 80%;
- The distribution will be equal to 90% of distributable surplus when the debt/equity ratio is less than 75%.

Equity is defined in the Order as deferred credits, preferred funding and retained earnings less the distributions paid or payable to the Province. Debt is defined as revolving borrowings, bonds, notes and debentures net of related sinking funds, temporary investments, repurchased debt and a term debenture receivable. Distributable surplus is defined as consolidated net income adjusted for finance charges capitalized.

The total distribution, as determined above, will be comprised of distributions on the preferred funding, to the extent they are declared, and a general distribution, representing the balance, out of distributable surplus.

For the year ended March 31, 1990, the Order specifically required B.C. Hydro to make a total distribution to the Province of \$130 million. The payment was comprised of the distribution declared on the preferred funding of \$29 million and a general distribution of distributable surplus in the amount of \$101 million.

**NOTE 9 FIXED ASSETS**

As at March 31	1990						1989	
	Fixed Assets in Service			Unfinished Construction*	Total Net Book Value	Composite Depreciation Rate	Total Net Book Value	Composite Depreciation Rate
	Original Cost	Accumulated Depreciation	Net Book Value					
Generation and storage	\$ 5,004	\$ 975	\$ 4,029	\$ 101	\$ 4,130	1.56%	\$ 4,182	1.57%
Transmission	2,354	567	1,787	12	1,799	2.25	1,794	2.40
Transformation	1,294	412	882	31	913	2.93	929	2.93
Distribution	1,599	553	1,046	67	1,113	3.12	1,027	3.82
Buildings, furniture and equipment	367	142	225	42	267	4.75	196	4.86
Other properties	99	29	70	—	70	9.92	65	9.21
Service vehicles	61	45	16	—	16	8.73	15	8.50
Research and development	44	7	37	—	37	2.79	37	3.70
<b>Total</b>	<b>\$ 10,822</b>	<b>\$ 2,730</b>	<b>\$ 8,092</b>	<b>\$ 253</b>	<b>\$ 8,345</b>		<b>\$ 8,245</b>	

\* Unfinished construction includes \$78 million (1989 - \$84 million) in deferred capital project costs mainly relating to the Peace Site C and Murphy-Keenleyside deferred capital projects.

## NOTE 10 LONG-TERM DEBT

As at March 31	1990			1989		
	U.S. (*%)	Cdn. (*%)	Total	U.S. (*%)	Cdn. (*%)	Total
Maturing in:						
1990	\$ —	\$ —	\$ —	\$ 256 (14.6)	\$ 300 (10.3)	\$ 556
1991	1 (5.6)	121 (8.2)	122	—	121 (8.2)	121
1992	88 (5.8)	259 (7.4)	347	95 (5.8)	259 (7.4)	354
1993	246 (13.0)	174 (7.2)	420	249 (13.0)	174 (7.2)	423
1994	—	716 (10.8)	716	—	187 (7.1)	187
1995	—	324 (9.0)	324	—	—	—
1 - 5 years	335 (11.0)	1,594 (8.8)	1,929	600 (12.5)	1,041 (8.1)	1,641
6 - 10 years	—	622 (8.8)	622	—	736 (8.5)	736
11 - 15 years	—	1,659 (10.4)	1,659	119 (10.3)	1,350 (9.9)	1,469
16 - 20 years	618 (8.8)	428 (11.5)	1,046	627 (8.8)	793 (11.7)	1,420
21 - 25 years	1,463 (14.3)	150 (13.5)	1,613	1,491 (14.3)	150 (13.5)	1,641
Bonds, notes and debentures	2,416 (12.5) (U.S. \$ 2,051)	4,453 (10.0)	6,869	2,837 (12.6) (U.S. \$ 2,355)	4,070 (9.7)	6,907
Less:						
Sinking funds	344 (U.S. \$ 294)	850	1,194	388 (U.S. \$ 325)	769	1,157
Term debenture	—	300	300	—	300	300
Repurchased debt	148 (U.S. \$ 124)	—	148	134 (U.S. \$ 111)	—	134
Net bonds, notes and debentures	1,924 (U.S. \$ 1,633)	3,303	5,227	2,315 (U.S. \$ 1,919)	3,001	5,316
Revolving borrowings	69 (U.S. \$ 59)	1,431	1,500	—	1,458	1,458
Long-term debt	\$ 1,993	\$ 4,734	\$ 6,727	\$ 2,315	\$ 4,459	\$ 6,774

\* Weighted average coupon rate

B.C. Hydro's long-term debt comprises bonds, notes and debentures, almost all of which have annual sinking fund requirements, and revolving borrowings obtained under a borrowing agreement with the Province, some of which have sinking funds. Long-term debt is presented net of sinking funds, a term debenture receivable which has been committed to debt repayments and debt repurchased from the market. The March 31, 1990 foreign exchange rate used by B.C. Hydro was 85.46 U.S. cents per Canadian dollar (1989 - 83.86 U.S. cents).

**NOTE 10 LONG-TERM DEBT (cont.)**

During the year ended March 31, 1990, B.C. Hydro issued the following bonds, notes and debentures:

Coupon Rate	Effective Rate	Series	Issue Date	Maturity Date	Principal
10.17%	10.185%	HG	May 10, 1989	May 10, 2009	\$ 9
10.01	10.025	HH	June 9, 1989	June 9, 2009	65
9.75	9.847	HI	July 6, 1989	July 6, 1994	150
12.00	10.662	HJ	January 31, 1990	October 20, 1993	150
11.625	11.814	HK	March 22, 1990	March 22, 1994	400
					<u>\$ 774</u>

Bonds, notes and debentures in the principal amount of Cdn. \$300 million and U.S. \$204 million matured during the year.

**GUARANTEE BY THE PROVINCE OF BRITISH COLUMBIA**

B.C. Hydro's outstanding debt is either held or guaranteed as to principal, interest and premium, if any, by the Province.

**SINKING FUNDS FOR BONDS, NOTES AND DEBENTURES**

Sinking funds are held by the Trustee, the Minister of Finance and Corporate Relations for the Province. Sinking fund income is recorded as a reduction of finance charges.

	1990	1989
Sinking funds at beginning of year	\$ 1,157	\$ 1,056
Add:		
Instalments	77	130
Income	111	113
	<u>188</u>	<u>243</u>
Less:		
Debt repayments	(100)	(103)
Debt extinguishment and cancellation	(43)	(25)
Surpluses recovered	(16)	—
Foreign exchange adjustments	8	(14)
	<u>37</u>	<u>101</u>
Net changes in sinking funds		
Sinking funds at end of year	<u>\$ 1,194</u>	<u>\$ 1,157</u>

**TERM DEBENTURE**

A term debenture was issued to B.C. Hydro by B.C. Gas Inc. in part settlement of the sale of the Mainland Gas Service in fiscal 1989. B.C. Hydro has entered into a trust arrangement with the Province whereby the interest and principal payments from B.C. Gas Inc. are to be applied against B.C. Hydro's general indebtedness to the Province.

The term debenture bears interest at 10.75% per annum payable semi-annually and is repayable in four equal annual payments of \$75 million on October 1 from 1990 to 1993. The debenture is secured by a first fixed mortgage on the assets of B.C. Gas Inc. and a guarantee from Inland Natural Gas Co. Ltd. B.C. Gas Inc. may repay the debenture at an earlier date.

**REPURCHASED DEBT**

Repurchased debt comprises B.C. Hydro bonds, notes and debentures purchased from the market but not cancelled or otherwise extinguished.

**NOTE 10 LONG-TERM DEBT (cont.)****REVOLVING BORROWINGS**

Funds obtained under a borrowing agreement with the Province will be repaid either from the issue of bonds, notes or debentures or further revolving borrowings extending beyond the next fiscal year. They have, therefore, been classified as long-term debt. The borrowings are recorded net of specifically related sinking funds of \$375 million. The funds obtained under the borrowing agreement are unsecured, have an authorization limit of \$2.0 billion and bear interest at prevailing money market rates. At March 31, 1990 these funds had a weighted average term to maturity of 254 days at an average coupon rate of 11.6% compared to 116 days and 11.4% as at March 31, 1989.

**DEBT MANAGEMENT PROGRAM**

During fiscal 1990, B.C. Hydro placed sufficient government guaranteed securities into an irrevocable trust to satisfy the scheduled interest and principal repayment requirements of Cdn. \$63 million (1989 - U.S. \$299 million) in bonds. In addition, during 1990 B.C. Hydro purchased and cancelled Cdn. \$27 million of bonds (1989 - U.S. \$181 million) and a further U.S. \$100 million was redeemed under the terms of an early call provision. The accounting loss of \$5 million (1989 - \$80 million) arising from these transactions has been included in finance charges.

**EXTINGUISHED DEBT**

As at March 31, 1990 a total of Cdn. \$505 million (1989 - Cdn. \$461 million) of debt, together with the related securities, has been removed from B.C. Hydro's consolidated balance sheet and is considered extinguished for financial reporting purposes.

**CASH REQUIREMENTS**

Total maturity payments and sinking fund instalments on bonds, notes and debentures outstanding as at March 31, 1990, by year of payment, are disclosed in the following table. U.S. cash requirements are shown in millions of U.S. dollars. As at March 31, 1990 there were 108 Canadian dollar (1989 - 114) and 12 U.S. dollar (1989 - 15) bond, note and debenture issues outstanding.

	Sinking Funds		Net Debt Maturities*		Total	
	U.S.	Cdn.	U.S.	Cdn.	U.S.	Cdn.
1991	\$ 24	\$ 47	\$ —	\$ 80	\$ 24	\$ 127
1992	24	45	—	170	24	215
1993	21	44	99	98	120	142
1994	21	43	—	102	21	145
1995	21	40	—	185	21	225
1991 - 1995	111	219	99	635	210	854
1996 - 2000	106	172	—	167	106	339
2001 - 2005	91	77	—	31	91	108
2006 - 2010	63	15	—	90	63	105
2011 - 2015	22	—	182	—	204	—
	<u>\$ 393</u>	<u>\$ 483</u>	<u>\$ 281</u>	<u>\$ 923</u>	<u>\$ 674</u>	<u>\$ 1,406</u>

\* Net debt maturities are determined after deducting sinking funds estimated to be available at maturity. The estimated sinking fund income, included therein, of Cdn. \$2,038 million and U.S. \$1,240 million is based on assumed earnings of 10.5% on existing Canadian dollar sinking fund investments and 8.5% for U.S. dollar sinking fund investments.

None of the above cash requirements are considered current as at March 31, 1990 as management intends to finance the payments either from the issue of bonds, notes or debentures or further revolving borrowings extending beyond the next fiscal year.

**HEDGED U.S. DOLLAR DEBT**

As at March 31, 1990 U.S. \$124 million (1989 - U.S. \$312 million) of debt and future sinking-fund instalments was hedged with forward foreign exchange contracts. A further U.S. \$418 million (1989 - U.S. \$436 million) of debt was hedged by the holding of U.S. dollar denominated securities in sinking funds and repurchased debt. As a result of these transactions, at March 31, 1990 B.C. Hydro had a net foreign currency exposure in U.S. dollar debt of U.S. \$1,568 million (1989 - U.S. \$1,607 million).

**NOTE 10 LONG-TERM DEBT (cont.)****REDEMPTION PROVISIONS**

Certain B.C. Hydro debt held by the Canada Pension Plan Investment Fund and by the Minister of Finance and Corporate Relations for the Province contains provisions allowing holders to redeem the debt prior to maturity, in whole or in part, subject to certain restrictions. At March 31, 1990 this debt amounted to \$772 million (1989 - \$771 million) net of related sinking funds.

**NOTE 11 SALE OF BUSINESSES**

During the year ended March 31 1989 B.C Hydro sold its non-electric businesses, comprised of the Mainland Gas Service, the Rail Service and the Victoria Gas Service, to the private sector for proceeds of \$787 million. After deducting associated selling costs of \$24 million and a provision of \$50 million for pension payments (as described in Note 12), an amount representing the net gain on the sale of \$220 million was paid to the Province pursuant to the requirements of the Hydro and Power Authority Privatization Act. The remaining \$493 million, representing the book value of the assets sold, was received by B.C. Hydro. This amount comprised a \$300 million term debenture issued to B.C. Hydro by B.C. Gas Inc., the purchaser of the Mainland Gas Service, (as described in Note 10) and cash of \$193 million.

**NOTE 12 PENSION PLAN**

Employees of B.C. Hydro contribute to a jointly-funded pension plan which provides a defined benefit pension based on years of membership service and highest five-year average pensionable earnings. A portion of the required contributions under the plan is applied to provide for annual cost-of-living increases (indexing) to pension recipients. Both the employees' basic contribution and indexing contribution are matched by B.C. Hydro. In addition, in both fiscal 1990 and 1989 B.C. Hydro made special annual contributions of \$4 million to fund past service pension costs and accrued deficits which arose in prior years from plan amendments and changes in actuarial assumptions.

Annual actuarial valuations are obtained to determine the present value of the plan liability for pension benefits accrued to the date of the valuation. These actuarial liabilities are compared with the market value of the pension plan assets to determine whether a net pension surplus or deficit exists. Based upon an extrapolation from preliminary actuarial valuation results as at December 31, 1989, the estimated present value of accrued pension benefits was \$808 million as at March 31, 1990 and the pension plan assets available for these benefits at that date amounted to \$813 million, resulting in a surplus of \$5 million.

As a result of the sale of businesses during the year ended March 31, 1989 the pension plan will incur additional costs. These costs are the future indexing of vested pensions provided to employees of the sold businesses who will no longer contribute to the plan and the cost impact of the removal of funds by those employees of the sold businesses who have elected to withdraw their accrued pensions from the plan. The actuary has estimated that the maximum cost to the fund should not exceed \$50 million. B.C. Hydro has paid \$29 million into the pension fund, and a further \$21 million is held in trust to be paid into the fund, if needed, upon the determination of the final cost to the plan.

**FINANCIAL STATISTICS***dollar amounts in millions**for the years ended or as at March 31*

	1990	1989
REVENUE	\$ 1,821	\$ 1,769
Cost of energy	303	264
GROSS MARGIN	1,518	1,505
EXPENSES		
Operations, maintenance and administration	350	269
Taxes	102	80
Depreciation	202	217
Finance charges	768	872
	1,422	1,438
OPERATING INCOME (LOSS)	96	67
Net rate stabilization transfers	23	15
Other income <sup>1</sup>	41	4
Extraordinary items		
NET INCOME (LOSS)	\$ 160	\$ 86
NET INCOME (LOSS) BY SOURCE		
Domestic	\$ 55	\$ 10
Export (stabilized)	64	72
Other income <sup>1</sup>	41	4
Extraordinary items		
NET INCOME (LOSS)	\$ 160	\$ 86
FIXED ASSETS <sup>2</sup>		
At cost	\$ 11,075	\$ 10,765
Less accumulated depreciation	2,730	2,520
	\$ 8,345	\$ 8,245
Fixed asset expenditures	\$ 346	\$ 210
Less contributions in aid of construction	40	25
Net fixed asset expenditures	\$ 306	\$ 185
DEBT <sup>3</sup>	\$ 6,727	\$ 6,774
EMPLOYEES <sup>2</sup>		
Regular	4 904	4 510
Temporary	857	677
	5 761	5 187

<sup>1</sup> 1990 is the gain on the sale of the Head Office building, 1981 to 1989 is net income from the Gas and Rail businesses.

<sup>2</sup> The Gas and Rail businesses were sold in 1989. The assets and employees of these businesses have been excluded from these statistics.

<sup>3</sup> Restated to conform with 1990 financial presentation.

1988	1987	1986	1985	1984	1983	1982	1981
\$ 1,718	\$ 1,579	\$ 1,647	\$ 1,513	\$ 1,230	\$ 1,174	\$ 1,130	\$ 887
274	229	257	211	172	170	118	29
<u>1,444</u>	<u>1,350</u>	<u>1,390</u>	<u>1,302</u>	<u>1,058</u>	<u>1,004</u>	<u>1,012</u>	<u>858</u>
258	226	243	270	230	223	216	171
74	119	100	117	108	103	88	84
211	207	191	208	216	159	133	119
827	854	874	739	480	442	378	375
<u>1,370</u>	<u>1,406</u>	<u>1,408</u>	<u>1,334</u>	<u>1,034</u>	<u>927</u>	<u>815</u>	<u>749</u>
74	(56)	(18)	(32)	24	77	197	109
(38)	107	(4)	(8)	14	(19)	(90)	
19	16	31	25	13		13	4
	(42)				(77)		
<u>\$ 55</u>	<u>\$ 25</u>	<u>\$ 9</u>	<u>\$ (15)</u>	<u>\$ 51</u>	<u>\$ (19)</u>	<u>\$ 120</u>	<u>\$ 113</u>
\$ (36)	\$ (112)	\$ (200)	\$ (171)	\$ (39)	\$ (2)	\$ (1)	\$ 109
72	163	178	131	77	60	108	
19	16	31	25	13		13	4
	(42)				(77)		
<u>\$ 55</u>	<u>\$ 25</u>	<u>\$ 9</u>	<u>\$ (15)</u>	<u>\$ 51</u>	<u>\$ (19)</u>	<u>\$ 120</u>	<u>\$ 113</u>
\$ 10,435	\$ 10,344	\$ 10,152	\$ 9,662	\$ 7,509	\$ 7,068	\$ 6,737	\$ 6,281
2,298	2,092	1,909	1,707	1,552	1,403	1,260	1,117
<u>\$ 8,137</u>	<u>\$ 8,252</u>	<u>\$ 8,243</u>	<u>\$ 7,955</u>	<u>\$ 5,957</u>	<u>\$ 5,665</u>	<u>\$ 5,477</u>	<u>\$ 5,164</u>
\$ 163	\$ 157	\$ 195	\$ 443	\$ 782	\$ 999	\$ 991	\$ 695
30	27	34	31	30	65	29	32
<u>\$ 133</u>	<u>\$ 130</u>	<u>\$ 161</u>	<u>\$ 412</u>	<u>\$ 752</u>	<u>\$ 934</u>	<u>\$ 962</u>	<u>\$ 663</u>
\$ 7,682	\$ 8,021	\$ 8,490	\$ 8,569	\$ 7,576	\$ 7,064	\$ 6,602	\$ 5,516
4 851	5 003	5 179	5 729	6 643	7 067	7 431	7 227
527	378	323	358	420	420	1 076	978
<u>5 378</u>	<u>5 381</u>	<u>5 502</u>	<u>6 087</u>	<u>7 063</u>	<u>7 487</u>	<u>8 507</u>	<u>8 205</u>

## OPERATING STATISTICS

<i>for the years ended or as at March 31</i>	1990	1989
<b>GENERATING NAMEPLATE CAPACITY<sup>1</sup> (megawatts)</b>		
Hydroelectric	9 332	9 332
Thermal	1 135	1 135
<b>Total</b>	<b>10 467</b>	<b>10 467</b>
<b>PEAK-ONE-HOUR DEMAND INTEGRATED SYSTEM (megawatts)</b>		
	7 373	7 485
<b>CUSTOMERS</b>		
Residential	1 111 143	1 084 569
General	150 601	146 270
Transmission	87	85
Other	2 705	2 688
Export	21	20
<b>Total</b>	<b>1 264 557</b>	<b>1 233 632</b>
<b>ELECTRICITY SOLD (gigawatt-hours)</b>		
Residential	10 880	10 802
General	12 661	12 377
Transmission	14 463	13 606
Other	1 026	1 048
<b>Domestic</b>	<b>39 030</b>	<b>37 833</b>
<b>Export</b>	<b>3 713</b>	<b>4 884</b>
<b>Total</b>	<b>42 743</b>	<b>42 717</b>
<b>Domestic change over previous year (%)</b>		
	3.2	4.8
<b>ELECTRIC REVENUES (in millions)</b>		
Residential	\$ 598	\$ 588
General	599	579
Transmission	420	397
Other	51	50
Rents and miscellaneous	38	46
<b>Domestic</b>	<b>1,706</b>	<b>1,660</b>
<b>Export</b>	<b>115</b>	<b>109</b>
<b>Total</b>	<b>\$ 1,821</b>	<b>\$ 1,769</b>
<b>AVERAGE REVENUE (cents per kilowatt-hour)</b>		
Residential	5.5	5.4
General	4.7	4.7
Transmission	2.9	2.9
Other	5.0	4.8
Export	3.1	2.2
<b>AVERAGE ANNUAL KILOWATT-HOUR USE PER RESIDENTIAL CUSTOMER<sup>2</sup></b>		
	9 889	9 738
<b>LINES IN SERVICE</b>		
Distribution (kilometres) <sup>3</sup>	49 761	48 640
Transmission (circuit kilometres)	17 502	17 130

<sup>1</sup> Excludes electricity available from other systems. Rated capacity has been exceeded on occasion.

<sup>2</sup> Restated to conform with 1990 presentation.

<sup>3</sup> 1984 to 1990 includes B.C. Hydro lines on private property.



1988	1987	1986	1985	1984	1983	1982	1981
9 332	9 332	9 332	9 332	7 489	7 491	7 491	7 491
1 141	1 149	1 151	1 171	1 271	1 341	1 347	1 346
<u>10 473</u>	<u>10 481</u>	<u>10 483</u>	<u>10 503</u>	<u>8 760</u>	<u>8 832</u>	<u>8 838</u>	<u>8 837</u>
6 830	6 345	6 816	6 193	6 215	5 508	5 902	5 475
1 062 213	1 041 784	1 023 468	1 005 533	987 659	967 754	943 587	915 270
142 707	139 936	137 051	134 018	133 652	132 383	130 818	128 163
80	81	72	67	70	65	62	59
2 527	2 445	2 353	2 265	2 336	2 227	2 433	2 636
23	20	21	22	16	13	14	10
<u>1 207 550</u>	<u>1 184 266</u>	<u>1 162 965</u>	<u>1 141 905</u>	<u>1 123 733</u>	<u>1 102 442</u>	<u>1 076 914</u>	<u>1 046 138</u>
9 986	9 779	9 649	9 667	9 067	8 790	8 755	8 104
11 695	11 137	10 770	10 285	9 957	9 736	9 727	9 377
13 412	12 582	11 681	10 957	9 240	9 040	9 305	9 612
996	919	757	593	805	1 074	1 177	1 129
<u>36 089</u>	<u>34 417</u>	<u>32 857</u>	<u>31 502</u>	<u>29 069</u>	<u>28 640</u>	<u>28 964</u>	<u>28 222</u>
9 481	4 665	9 407	6 378	2 834	3 623	6 315	1 816
<u>45 570</u>	<u>39 082</u>	<u>42 264</u>	<u>37 880</u>	<u>31 903</u>	<u>32 263</u>	<u>35 279</u>	<u>30 038</u>
4.9	4.7	4.3	8.4	1.3	(1.1)	2.6	6.7
\$ 548	\$ 539	\$ 517	\$ 509	\$ 448	\$ 410	\$ 348	\$ 312
547	524	498	469	425	389	328	301
373	348	322	307	239	228	161	153
48	46	37	28	31	34	30	29
18	29	21	18	12	14	24	24
<u>1,534</u>	<u>1,486</u>	<u>1,395</u>	<u>1,331</u>	<u>1,155</u>	<u>1,075</u>	<u>891</u>	<u>819</u>
184	93	252	182	75	97	233	63
<u>\$ 1,718</u>	<u>\$ 1,579</u>	<u>\$ 1,647</u>	<u>\$ 1,513</u>	<u>\$ 1,230</u>	<u>\$ 1,172</u>	<u>\$ 1,124</u>	<u>\$ 882</u>
5.5	5.5	5.4	5.3	4.9	4.7	4.0	3.8
4.7	4.7	4.6	4.6	4.3	4.0	3.4	3.2
2.8	2.8	2.8	2.8	2.6	2.5	1.7	1.6
4.9	5.1	4.9	4.8	3.8	3.1	2.6	2.6
1.9	2.0	2.7	2.9	2.7	2.7	3.7	3.5
9 470	9 457	9 485	9 670	9 274	9 198	9 420	9 013
47 754	47 178	46 533	45 795	44 737	42 231	40 789	39 472
17 056	17 056	17 197	16 996	16 701	16 543	16 098	15 335

**TOTAL REQUIREMENTS FOR ELECTRICITY AND SOURCES OF SUPPLY**

<i>for the years ended March 31</i>	1990		1989	
	Gigawatt hours	%	Gigawatt hours	%
<b>REQUIREMENTS</b>				
Domestic	39 030	83.1	37 833	80.4
Export	3 713	7.9	4 884	10.4
	42 743	91.0	42 717	90.8
Line loss and system use	4 237	9.0	4 360	9.2
	<u>46 980</u>	<u>100.0</u>	<u>47 077</u>	<u>100.0</u>
<b>SOURCES OF SUPPLY</b>				
<b>Hydroelectric generation</b>				
Gordon M. Shrum	11 434	24.4	15 452	32.8
Revelstoke	6 543	13.9	8 224	17.5
Mica	5 498	11.7	7 258	15.4
Kootenay Canal	3 442	7.3	2 918	6.2
Seven Mile	3 248	6.9	2 328	4.9
Peace Canyon	2 896	6.2	3 799	8.1
Bridge River	2 212	4.7	2 391	5.1
Other	4 516	9.6	4 793	10.2
<b>Thermal generation</b>				
Burrard	4 143	8.8	515	1.1
Other	143	0.3	146	0.3
Purchases and other transactions	2 905	6.2	(747)	(1.6)
	<u>46 980</u>	<u>100.0</u>	<u>47 077</u>	<u>100.0</u>

**GENERATING NAMEPLATE CAPACITY**

<i>as at March 31, 1990</i>	Megawatts
<b>HYDROELECTRIC PLANTS</b>	
Gordon M. Shrum	2 416
Revelstoke	1 843
Mica	1 736
Peace Canyon	700
Seven Mile	608
Kootenay Canal	529
Bridge River	428
Other	1 072
Total hydroelectric	<u>9 332</u>
<b>THERMAL PLANTS</b>	
Burrard	912
Gas turbine	146
Diesel	77
Total thermal	<u>1 135</u>
<b>TOTAL</b>	<u>10 467</u>

BOARD OF DIRECTORS

- <sup>E</sup> Lawrence I. Bell, *Chairman*  
(Vancouver)
- <sup>E</sup> The Hon. Jack Davis  
(Vancouver)
- <sup>APR</sup> A. Neil Eyben  
(Langley)
- <sup>B</sup> Sidney W. Forstrom  
(Powell River)
- <sup>P</sup> David K. Lane\*  
(Terrace)
- <sup>BR</sup> Kenneth D. Magnes  
(Revelstoke)
- <sup>CDP</sup> Arthur L. Meyers  
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- <sup>AR</sup> Charles E. Osterloh\*\*  
(Invermere)
- <sup>R</sup> Diane Piket  
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- <sup>AR</sup> J. Guy Rose  
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- <sup>CE</sup> William L. Sauder  
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- <sup>AD</sup> Sandra D. Sutherland, Q.C.  
(Vancouver)
- <sup>ABP</sup> John S. Waldie  
(Victoria)
- <sup>CR</sup> Patrick D. Walsh  
(Fort St. John)
- <sup>B</sup> John F. Whitmer\*  
(Prince George)

\* Appointed May 2, 1990

\*\* Resigned April 30, 1990

COMMITTEES OF THE BOARD OF DIRECTORS

- <sup>A</sup> Audit
- <sup>B</sup> Budget
- <sup>D</sup> Donations
- <sup>E</sup> Executive
- <sup>C</sup> Executive Compensation
- <sup>P</sup> Properties
- <sup>R</sup> Reservoirs

OFFICERS

- Lawrence I. Bell  
*Chairman and Chief Executive Officer*
- Christopher W.J. Boatman  
*Corporate Secretary*
- Myra E.M. Watson  
*Assistant Corporate Secretary*
- Raymond H. Hunt  
*Chief Engineer*
- Darlene M. Barnett  
*General Counsel*

VICE-PRESIDENTS

- Christopher W.J. Boatman  
*Corporate and Environmental Affairs*
- Arthur E. Geikie  
*Energy Innovation*
- Einar O. Field  
*Human Resources*
- Raymond H. Hunt  
*System Development*
- Frank J. Klassen  
*Finance and Administration*
- John P. Sheehan  
*Customer Services*
- P. Donald Swoboda  
*Production*

FINANCIAL OFFICERS

- David A. Harrison  
*Corporate Comptroller*
- John N. Shaw  
*Treasurer*

This Annual Report was coordinated and prepared through the efforts of an empowered work team from the Corporate Accounting department.

Copies of this Annual Report, the B.C. Hydro Corporate Business Plan 1990 - 1993, or the Directions Employee Publication are available by writing our Information Centre or telephoning (604) 663-2114.

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