



BC HYDRO

ANNUAL REPORT 2002

## MESSAGE FROM THE MINISTER

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Government of British Columbia  
Minister of Energy and Mines  
Minister Responsible for BC Hydro  
Vancouver  
July 2002

The Honourable Iona Campagnolo, PC, CM, OBC  
Lieutenant Governor of the Province of British Columbia

Dear Madam,

BC Hydro continues to make important contributions to the province of British Columbia by providing reliable, low-cost power for those who live and work here. Our government looks forward to maintaining this competitive advantage to ensure British Columbians have access to a secure supply of reliable, affordable power for years to come.

I am pleased to submit BC Hydro's annual report for the year ended March 31, 2002.

Yours respectfully,

A handwritten signature in black ink, appearing to read "R. Neufeld".

Richard Neufeld

## MESSAGE FROM THE CHAIR AND CEO, AND THE PRESIDENT AND COO

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Electricity, its production, delivery, and marketing, is an ever-more complex business. Recent events of the past year have only served to reinforce the need for accountability, transparency and above all else, integrity in decision making.

BC Hydro has strived to bring increased clarity to our businesses this year, together with enhanced emphasis on performance measurement, commercial management and project implementation. The 2002 Performance Plan is the document which holds us accountable to the Province, and publicly demonstrates our commitment to excellence.

This past year we have worked to decentralize our business by establishing three lines of business – Transmission, Distribution and Generation – and through creating two competitive service organizations – Engineering and Field Resources, and by encouraging the company as a whole to improve its focus on serving our customers. This brings into sharp focus our continued emphasis on operating excellence and our intention to further reduce transaction costs in bringing electricity to our customers.

As employees in all parts of the Province demonstrate, there is pride in delivering that high quality of service to our customers. Through collaborative, ongoing strategic workforce planning, we are ensuring that the vast knowledge and employee skill set is a legacy that continues to serve.

We have worked hard at clarifying the information provided to our customers and the public, and improving access to key planning information. All publications, conference materials, and relevant operational data, including this year's Annual Report, are available on our Web site: [www.bchydro.com](http://www.bchydro.com).

BC Hydro hosted world experts at three conferences this year: "Transmission: Connecting to the Future", "Generation: Energy and the Economy", and "Conservation and Energy Efficiency: Back to the Future". It was clear from the level of discussion at these events that we have the capabilities in British Columbia to not only continue to operate world class assets, but to meet the challenges of doing so sustainably.

As a result of BC Hydro's initial Core Review, we moved this past year towards developing partnerships to improve our services to customers through call centres, billing and meter reading, information technology, and operation of our vehicle fleet. As we anticipate the release of the Provincial Energy Policy, we are confident that the task of unlocking the potential of BC Hydro has only just begun.



Larry Bell  
Chair and Chief Executive Officer



Michael Costello  
President and Chief Operating Officer

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## YEAR IN REVIEW

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### FINANCIAL RESULTS

- Net income of \$403 million for the twelve months ended March 31, 2002, was \$43 million lower than that earned during the same period last year. Before the Customer Profit Sharing and any transfers to or from the Rate Stabilization Account, net income of \$258 million was \$601 million lower than that earned in the prior year. A number of non-controllable factors combined to produce this decline in net income, including very low water inflow levels, a dramatic decline in market prices for energy (since late June 2001), and the effects of the slowing North American economy.
- A \$145 million transfer from the Rate Stabilization Account (RSA) was required this year in order for BC Hydro to earn its allowed return on equity. The RSA balance totaled \$87 million at March 31, 2002 (after the transfer).
- Revenues of \$6,311 million were \$1,578 million lower than the prior year. This decrease was largely due to lower electricity trade revenues earned this year (primarily due to the decline in market prices).
- Expenses of \$5,509 million decreased by \$962 million from the same period in the prior year. Lower energy costs, due mainly to lower market prices for energy purchases, accounted for the majority of the total decrease in expenses. An increase in the volume of energy purchases required to meet domestic demand (due to a reduction in low-cost hydro generation as a result of lower water inflows) partly offset the decrease in expenses. Finance charges totalling \$544 million declined by approximately three per cent from the previous year.
- The forecast for fiscal 2003, as per BC Hydro's Service Plan, is for an expected net income of \$350 million before Rate Stabilization Account transfers.

### PERFORMANCE MEASURES

- Of BC Hydro's 19 performance measures this year, 14 met or exceeded targets and five did not. In the previous fiscal year, BC Hydro had nine performance measures, of which eight met or exceeded target and one did not.

- BC Hydro has reduced its performance measures for the Fiscal 2003 year from 19 to 10.

### SUPPLY AND DEMAND

- Total sales in Fiscal 2002 were approximately 400 gigawatt-hours (GW·h) lower than the previous year due to soft demand for B.C.'s commodity exports and a slow population growth in the province. Even so, load growth is still projected to average 800 GW·h/year over the next 10 years.
- The peak demand for domestic customers of 8692 megawatts (MW) was reached on December 4, 2001. This was lower than the all-time record for the system of 8995 MW, which occurred in the winter of 2000.
- Market prices for electricity and gas were low compared to 2001 but showed signs of modest recovery in late fiscal 2002. Near-term future prices remain low, although most macro-economic forecasts still point to a recovery by later this year.
- On the supply side, low – and in some cases record low – snowpack, inflows and reservoir levels throughout the Pacific Northwest early in the fiscal year reduced the level of available hydro generation. Increased electricity purchases were one result and as such BC Hydro ended up being a net importer of power for the year. This year, inflows are returning to normal and are projected to be 106 per cent of average.

### LINES OF BUSINESS

- Consistent with industry trends and best practices, BC Hydro management made a decision during the fiscal year to move to a "Lines of Business" structure within the company as the best way to become more competitive, focus resources on distinct customer groups and more effectively meet those customers' needs. By the end of March, Generation, Transmission and Distribution Lines of Business had been created along with two service groups – Field Services and Engineering Services. Together with the existing Corporate

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Operations, Shared Services and Subsidiaries, the company began operating this way for the Fiscal 2003 business year.

- Significant progress was made this year in the area of Green Energy acquisition, with BC Hydro signing contracts with 19 green independent power producers (IPPs) in the less than 40 GW·h/year category and offering three contracts totalling approximately 441 GW·h/year to green IPPs in the greater than 40 GW·h/year category.
- Work continued on two capital projects that will help increase electricity supply to customers on Vancouver Island. BC Hydro undertook significant public consultation activities and filed an application with the provincial Environmental Assessment Office for the \$370 million Vancouver Island Generation Project (VIGP), a new high-efficiency natural gas-fired electricity generation facility to be built at Duke Point in Nanaimo. The cost of VIGP at March 31, 2002 was \$370 million and will not change, subject to construction inflation index costs. B.C. Regulatory applications were also filed with both the National Energy Board (in Canada) and the Federal Energy Regulatory Commission (in the United States) for the Georgia Strait Crossing Project, a \$260 million natural gas pipeline being proposed by BC Hydro and Williams Company that will supply gas to facilities such as the Vancouver Island Generation Project, the Island Cogeneration Project in Campbell River and other customers converting from fuel oil.
- This year, BC Hydro experienced one of the worst storms and power outages in recent memory. On December 14, winds gusting to 115 kilometres per hour resulted in more than 150 000 customers – about ten per cent of our total – being without power during the peak of the storm in the Lower Mainland, Sunshine Coast and parts of Vancouver Island. BC Hydro crews worked around the clock to repair downed lines and restore service, most of which was accomplished in a couple of days. The final costs for storm clean-up and infrastructure replacement were \$2.1 million.

- A revitalized Power Smart program was launched and surpassed its goal for the year of an annual rate of savings of 120 GW·h through a combination of initiatives involving residential, commercial and industrial customers. In addition to these savings, over 250 GW·h were realized during the year through the Power Smart Industrial Rate, exceeding the target for the rate to acquire 150 GW·h.

## OTHER

- Throughout the fiscal year Powerex, BC Hydro's power marketing subsidiary, participated in two bankruptcy proceedings in California in an effort to recover approximately \$285 million (U.S.) it is still owed for sales to the California Power Exchange and California Independent System Operator in 2000 and 2001. Powerex was also actively involved in regulatory hearings on refunds to California for sales during the same period. Powerex will continue to participate in these and other initiatives in fiscal 2003 to protect its interests respecting its past sales to California.
- BC Hydro issued a Request for Expressions of Interest to the private sector for three of its service areas this year – Customer Services, Westech and Fleet Services. Accenture was subsequently short-listed as the proponent for Customer Services and Westech, and additional services were included for consideration. Work is still progressing on a short-listed proponent for the Fleet bid. The goal is to have Memoranda of Understanding for both service areas this summer and to have them implemented by early 2003.

## FINANCIAL AND OPERATING STATISTICS

### KEY FINANCIAL AND OPERATING COMPARATIVES

<i>Millions of dollars unless otherwise stated</i>	2002	2001	2000	1999	1998
<b>Financial Comparatives</b>					
Revenues	\$ 6,311	\$ 7,889	\$ 3,480	\$ 3,043	\$ 2,554
Net income	\$ 403	\$ 446	\$ 416	\$ 395	\$ 408
Capital assets	\$ 9,510	\$ 9,361	\$ 9,320	\$ 9,236	\$ 9,168
Net long-term debt	\$ 6,889	\$ 6,214	\$ 7,005	\$ 7,491	\$ 7,191
Rate Stabilization Account	\$ 87	\$ 232	\$ 129	\$ –	\$ –
Retained earnings	\$ 1,529	\$ 1,459	\$ 1,385	\$ 1,312	\$ 1,243
Capital and deferred expenditures	\$ 545	\$ 413	\$ 406	\$ 392	\$ 325
Debt to equity	72:28	70:30	74:26	77:23	77:23
Return on equity (%)	15.24	16.59	16.69	17.43	18.69
Interest coverage	1.43	2.48	1.89	1.60	1.66
<b>Operating Comparatives</b>					
Number of customers	1 609 871	1 595 287	1 579 658	1 558 294	1 534 601
Generating capacity (MW)					
Hydroelectric	10 009	10 009	10 000	9 960	9 921
Thermal	1 093	1 093	1 110	1 070	1 067
Peak one-hour demand (MW)	8 692	8 995	8 423	8 777	8 243
Average annual kW·h use					
per residential customer	10 695	10 344	10 507	10 201	10 171
Average number of customers per employee	265	275	284	285	271
Domestic sales (GW·h)	47 801	48 131	46 442	45 791	43 292
Electricity trade sales (GW·h)	20 666	23 900	23 410	18 715	13 168
Electricity sold per employee (GW·h)	11.32	12.48	12.63	11.89	10.08

British Columbia Hydro and Power Authority (BC Hydro) is a provincial Crown corporation. Our mission is to provide integrated energy solutions to our customers in an environmentally and socially responsible manner.

As one of the largest electric utilities in Canada, BC Hydro serves more than 1.6 million customers in an area containing over 94 per cent of British Columbia's population. Between 43 000 and 54 000 gigawatt-hours of electricity are generated annually, depending upon prevailing water levels. Electricity is delivered to customers mainly through an interconnected system of more than 72 000 kilometres of transmission and distribution lines.

BC Hydro's Board of Directors is appointed by the Lieutenant-Governor in Council and is responsible for the overall direction of the company.

## FINANCIAL STATISTICS

for the years ended or as at March 31 (millions of dollars)

	2002	2001	2000	1999	1998
<b>Revenues</b>	<b>\$ 6,311</b>	<b>\$ 7,889</b>	<b>\$ 3,480</b>	<b>\$ 3,043</b>	<b>\$ 2,554</b>
<b>Expenses</b>					
Energy costs	4,407	5,162	1,334	1,058	599
Operations, maintenance and administration	550	755	475	443	411
Depreciation and amortization	386	380	375	347	342
Taxes	166	174	172	173	177
Finance charges	544	559	579	615	585
	<b>6,053</b>	<b>7,030</b>	<b>2,935</b>	<b>2,636</b>	<b>2,114</b>
<b>Income Before Customer Profit Sharing, Employee Transition Option Costs and Rate Stabilization Account Transfers</b>	<b>258</b>	<b>859</b>	<b>545</b>	<b>407</b>	<b>440</b>
Customer profit sharing	–	310	–	–	32
Employee transition option costs	–	–	–	12	–
Rate Stabilization Account transfers	(145)	103	129	–	–
<b>Net income</b>	<b>\$ 403</b>	<b>\$ 446</b>	<b>\$ 416</b>	<b>\$ 395</b>	<b>\$ 408</b>
<b>Capital assets</b>					
At cost	\$15,067	\$14,617	\$14,302	\$13,925	\$13,592
Less: Accumulated depreciation	5,557	5,256	4,982	4,689	4,424
<b>Net Book Value</b>	<b>\$ 9,510</b>	<b>\$ 9,361</b>	<b>\$ 9,320</b>	<b>\$ 9,236</b>	<b>\$ 9,168</b>
<b>Capital asset expenditures</b>					
Sustaining	\$ 333	\$ 270	\$ 265	\$ 242	\$ 179
Expansion	198	142	138	145	140
Total capital asset expenditures	\$ 531	\$ 412	\$ 403	\$ 387	\$ 319
Less: Contributions in aid of construction	54	44	41	39	47
<b>Net Capital Asset Expenditures</b>	<b>\$ 477</b>	<b>\$ 368</b>	<b>\$ 362</b>	<b>\$ 348</b>	<b>\$ 272</b>
<b>Net Long-Term Debt<sup>1</sup></b>	<b>\$ 6,889</b>	<b>\$ 6,214</b>	<b>\$ 7,005</b>	<b>\$ 7,491</b>	<b>\$ 7,191</b>

<sup>1</sup>Consists of long-term debt net of sinking funds including current portion less temporary investments.

## OPERATING STATISTICS

<i>for the years ended or as at March 31</i>	2002	2001	2000	1999	1998
Generating capacity (megawatts)					
Hydroelectric <sup>1</sup>	10 009	10 009	10 000	9 960	9 921
Thermal	1 093	1 093	1 110	1 070	1 067
<b>Total</b>	<b>11 102</b>	<b>11 102</b>	<b>11 110</b>	<b>11 030</b>	<b>10 988</b>
Peak one-hour demand integrated system (megawatts)	8 692	8 995	8 423	8 777	8 243
Customers					
Residential	1 424 505	1 411 333	1 397 926	1 379 310	1 359 359
Light industrial and commercial	182 025	180 607	178 454	175 772	172 079
Large industrial	132	131	126	97	91
Other	3 064	3 042	3 032	3 011	2 977
Electricity trade	145	174	120	104	95
<b>Total</b>	<b>1 609 871</b>	<b>1 595 287</b>	<b>1 579 658</b>	<b>1 558 294</b>	<b>1 534 601</b>
Electricity sold (gigawatt-hours)					
Residential	15 170	14 537	14 599	13 987	13 701
Light industrial and commercial	16 446	16 292	15 960	15 776	15 511
Large industrial	14 513	15 573	14 644	14 705	13 042
Other	1 672	1 729	1 239	1 323	1 038
Domestic	47 801	48 131	46 442	45 791	43 292
Electricity trade	20 666	23 900	23 410	18 715	13 168
<b>Total</b>	<b>68 467</b>	<b>72 031</b>	<b>69 852</b>	<b>64 506</b>	<b>56 460</b>
Domestic change over previous year (%)	(0.7)	3.6	1.4	5.8	(3.1)
Revenues (millions)					
Residential	\$ 930	\$ 892	\$ 894	\$ 855	\$ 839
Light industrial and commercial	874	866	849	838	828
Large industrial	482	524	482	488	424
Other energy sales	89	90	73	77	65
Domestic electric	2,375	2,372	2,298	2,258	2,156
Miscellaneous	75	59	53	46	57
Domestic	2,450	2,431	2,351	2,304	2,213
Electricity trade	3,861	5,458	1,129	739	341
<b>Total</b>	<b>\$ 6,311</b>	<b>\$ 7,889</b>	<b>\$ 3,480</b>	<b>\$ 3,043</b>	<b>\$ 2,554</b>
Average revenue (per kilowatt-hour)					
Residential	6.1¢	6.1¢	6.1¢	6.1¢	6.1¢
Light industrial and commercial	5.3	5.3	5.3	5.3	5.3
Large industrial	3.3	3.4	3.3	3.3	3.3
Other	5.3	5.2	5.9	5.8	6.3
Electricity trade	18.7	22.8	4.8	3.9	2.6
Average annual kilowatt-hour use per residential customer	10 695	10 344	10 507	10 201	10 171
Lines in service					
Distribution (kilometres)	54 451	53 568	53 158	52 727	52 076
Transmission (circuit kilometres)	18 025	18 025	17 822	17 815	17 811
Number of employees <sup>2</sup>	6 144	5 952	5 587	5 476	5 379

<sup>1</sup>Maximum sustained generating capacity.

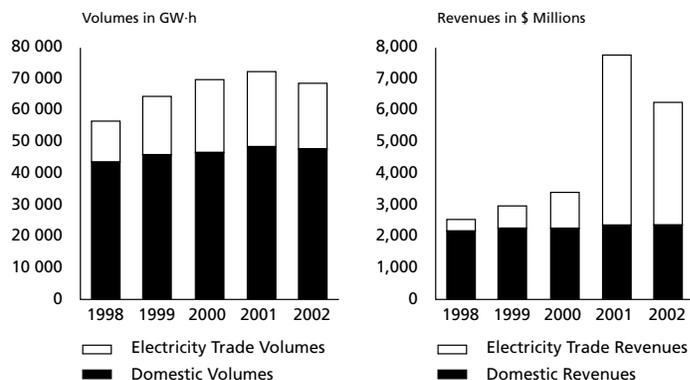
<sup>2</sup>Includes full-time and part-time employees.

## TOTAL REQUIREMENTS FOR ELECTRICITY AND SOURCES OF SUPPLY

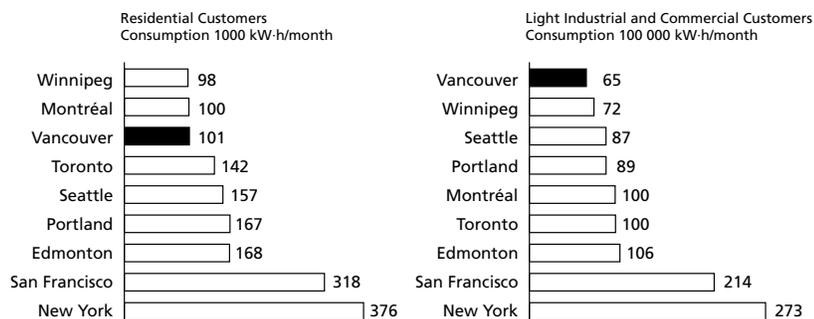
<i>for the years ended or as at March 31</i>		2002		2001		2000	
	<b>GENERATING CAPACITY (MEGAWATTS)</b>	<b>GIGAWATT- HOURS</b>	<b>%</b>	<b>GIGAWATT- HOURS</b>	<b>%</b>	<b>GIGAWATT- HOURS</b>	<b>%</b>
Requirements							
Domestic	11 102	47 801	65.0	48 131	62.3	46 442	62.0
Electricity trade		20 666	28.1	23 900	31.0	23 410	31.2
		68 467	93.1	72 031	93.3	69 852	93.2
Line loss and system use		5 033	6.9	5 200	6.7	5 093	6.8
		73 500	100.0	77 231	100.0	74 945	100.0
Sources of supply							
Hydroelectric generation							
Gordon M. Shrum	2 730	13 624	18.6	14 176	18.4	13 636	18.2
Revelstoke	1 980	6 943	9.5	8 612	11.1	9 331	12.4
Mica	1 805	5 757	7.8	7 657	9.9	7 992	10.6
Kootenay Canal	580	2 141	2.9	2 753	3.6	4 034	5.4
Peace Canyon	694	3 318	4.5	3 525	4.6	3 414	4.6
Seven Mile	594	2 216	3.0	2 627	3.4	3 286	4.4
Bridge River	466	2 000	2.7	2 203	2.8	3 065	4.1
Other	1 160	4 486	6.1	3 894	5.0	5 169	6.9
	10 009	40 485	55.1	45 447	58.8	49 927	66.6
Thermal generation							
Burrard	912	2 731	3.7	3 974	5.2	1 318	1.7
Other	181	447	0.6	464	0.6	336	0.5
Purchases under long-term commitments							
		7 512	10.2	6 304	8.2	7 768	10.4
Purchases under short-term commitments							
		22 608	30.8	21 655	28.0	15 538	20.7
Exchange net							
		(283)	(0.4)	(613)	(0.8)	58	0.1
	11 102	73 500	100.0	77 231	100.0	74 945	100.0

## FINANCIAL HIGHLIGHTS

### Domestic and Electricity Trade Sales

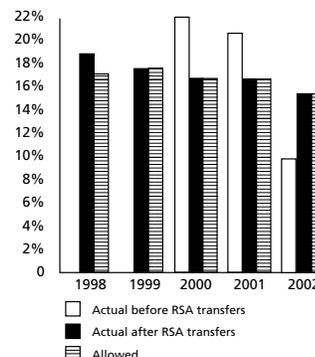


### Comparative Index of Electricity Prices



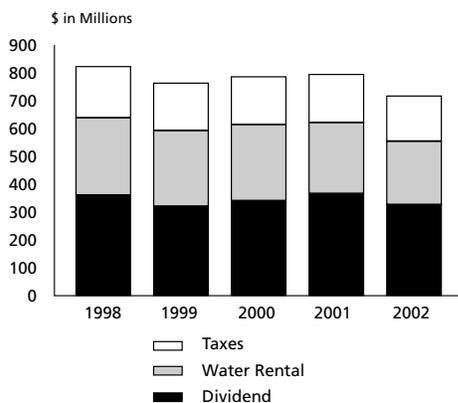
Monthly billings (excluding all taxes)  
Rate in effect May 1, 2001  
Source: Hydro-Québec: Comparison of Electricity Prices in Major North American Cities

### Return on Equity



BC Hydro's allowed 1995 rate of return was approved by the British Columbia Utilities Commission in its last rate decision of November 24, 1994. The following years' rates of return were calculated by BC Hydro using the same method as in 1995. The allowed return on equity has been calculated to equal, on a pre-income tax basis, that of the most comparable investor-owned utility. The Rate Stabilization Account (RSA) was established on March 30, 2000.

### Payments to the Province



### Transfers to (from) Rate Stabilization Account (RSA)

	Transfer	Balance
2000	129	129
2001	103	232
2002	(145)	87

The RSA was established on March 30, 2000, to mitigate the impact of volatile earnings on ratepayers. Transfers are made to the RSA during high-income years to reduce the need for rate increases in lower-income years. In years when BC Hydro's actual return on equity is in excess of that allowed by the British Columbia Utilities Commission, a transfer is made from income into the RSA. In lower-income years, when BC Hydro's return on equity is below that allowed, a transfer is made from the RSA, if there is a balance, to offset any rate increase that may be needed to allow BC Hydro to earn its allowed return on equity.

## FINANCIAL RESULTS

### MANAGEMENT DISCUSSION AND ANALYSIS

The Management Discussion and Analysis reports on BC Hydro's consolidated results and financial position. This discussion should be read in conjunction with the consolidated financial statements of the company and related notes.

#### Results

The impact of the slowing U.S. economy and the dramatic collapse of market prices for electricity since late June 2001 have had a significant impact on earnings this year. Low water inflows into BC Hydro reservoirs have also had a significant negative influence on earnings. Net income before the customer profit sharing and the transfer from the Rate Stabilization Account of \$258 million, was \$601 million lower than for the same period in the previous year.

#### Domestic Revenues

##### Residential

Residential revenues of \$930 million were \$38 million higher than in the previous year primarily as a result of the addition of approximately 13 200 residential customers since March 31, 2001. An increase in the average consumption per customer, due mainly to colder weather experienced in March, also contributed to the favourable variance. The weather in March 2002 was the coldest since that experienced in 1976 and was the third coldest on record.

##### Light Industrial and Commercial

Light industrial and commercial revenues of \$874 million were \$8 million higher than for the same period last year. Most of the increase resulted from customer growth mainly in the service sectors. A total of 1418 new customers were added during fiscal 2002.

##### Large Industrial

Large industrial revenues of \$482 million were \$42 million lower than for the same period in the previous year. The decrease was primarily due to a reduction in consumption by several companies in the pulp and paper sector during the second half of the year as a result of the general slowdown in the economy and weak commodity prices.

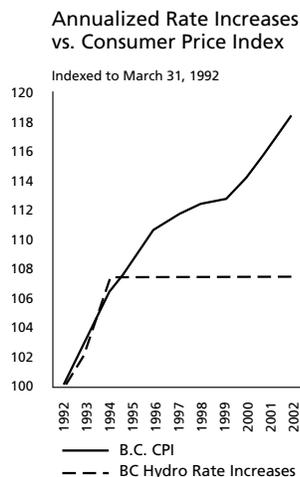
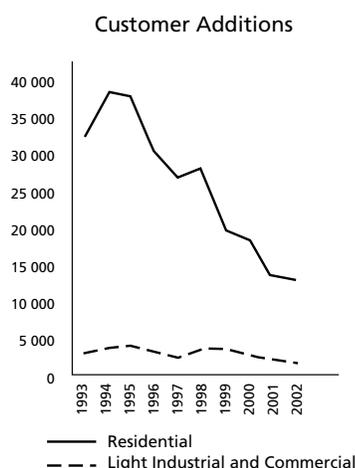
##### Miscellaneous

Miscellaneous revenues primarily consist of transmission wheeling revenues, rents and connections charges, and other ancillary services.

Miscellaneous revenues of \$75 million for the 12 months ended March 31, 2002, were \$16 million higher than for the same period last year primarily due to an increase in ancillary service and transmission wheeling revenues earlier in the year. As part of open access to BC Hydro's transmission lines, BC Hydro sells transmission to customers transmitting wholesale electricity.

##### Other Energy Sales

Other energy sales include the sales of energy to other utilities within B.C. and sales of firm energy to those outside the province under long-term contracts, which are reflected in BC Hydro's domestic load requirements. The sales outside the province primarily relate to sales to Seattle City Light under the Skagit River Treaty Agreement. Other energy sales of \$89 million for the 12 months ended March 31, 2002 were similar to the same period in the previous year.



BC Hydro has not had a rate increase since April 1993. Given inflation over the last ten years, real electricity rates for BC Hydro's domestic customers have declined by approximately 11 per cent.

## Electricity Trade Revenues

BC Hydro's electricity system is interconnected with systems in Alberta and the western United States. This interconnection facilitates sales and purchases of electricity outside British Columbia. While engaged in electricity trade, BC Hydro ensures its ability to meet its domestic supply requirements is not put under undue risk as a result of these transactions. Electricity trade activities are carried out by Powerex, a wholly owned subsidiary of BC Hydro.

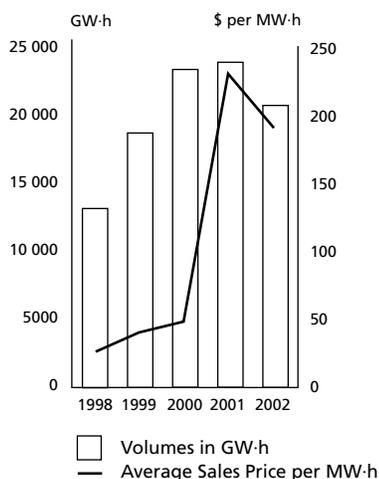
Electricity trade revenues were \$3,861 million for the twelve months ended March 31, 2002, a decrease of \$1,597 million from the same period last year. While revenues were very strong during the first quarter of this year, due primarily to higher market prices in April and May, they declined substantially in the last nine months of the year. This decline in market

prices, to more traditional levels experienced prior to last year, has been caused primarily by a reduction in demand due to the slowdown in the U.S. economy, conservation measures and mild weather conditions in California and its surrounding regions. An increase in supply capacity due to new generation units coming online in the region has also put downward pressure on market prices.

The following table compares electricity trade revenues for each quarter of this year compared to the prior year. The average sale price during the second quarter of this year was significantly higher than market because BC Hydro had locked in high-priced forward sales before the market prices fell. BC Hydro could not lock in forward sales to the same degree for the third and fourth quarters.

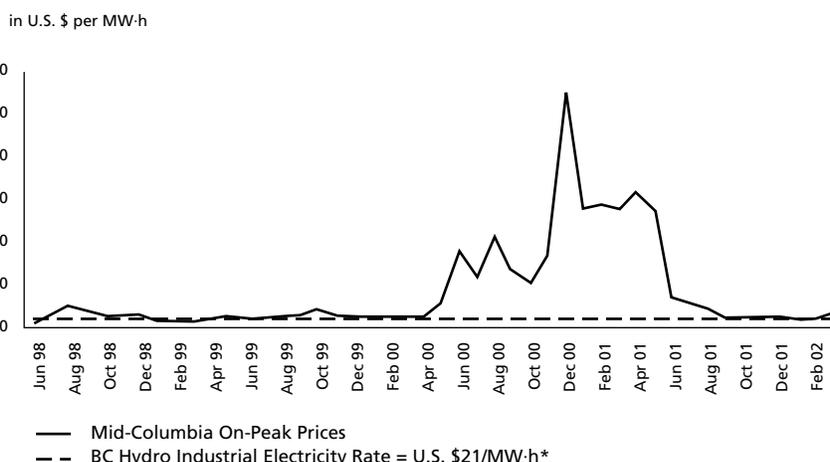
	Revenues (millions of dollars)		Volumes (in GW-h)		Average Sale Price (\$/MW-h)	
	2002	2001	2002	2001	2002	2001
1st Quarter	\$1,860	\$ 692	4,940	5,467	\$376.5	\$126.5
2nd Quarter	1,247	1,544	6,254	7,484	199.4	206.3
3rd Quarter	458	1,552	5,528	6,457	82.8	240.6
4th Quarter	296	1,670	3,944	4,492	75.1	371.8
Total	\$3,861	\$5,458	20,666	23,900	\$186.8	\$228.4

### Electricity Trade Volumes and Average Sale Prices



Electricity trade sale prices decreased significantly to \$187/MW-h in fiscal 2002 from \$228/MW-h in fiscal 2001. The decrease in prices and sales volumes were largely due to the slowdown in the U.S. economy.

### Mid-Columbia On-Peak Prices



Market prices at the Mid-Columbia trading hub in central Washington State are indicative of the prices in the Pacific Northwest. Market prices have been extremely volatile over the last several years.

\*Assumes exchange rate of \$1.60 Cdn. to \$1.00 U.S.

## Energy Costs

Energy costs are composed of the following sources of supply:

	(in millions)		(gigawatt-hours)		(\$ per MW-h)	
	2002	2001	2002	2001	2002	2001
Hydro	\$ 228	\$ 255	40 202	44 834	\$ 5.7	\$ 5.7
Purchases from Independent Power Producers	180	116	2 469	1 972	72.9	58.8
Other electricity purchases	3,451	4,036	27 559	25 893	125.2	155.9
Natural gas	276	452	3 178	4 438	86.8	101.8
Non-integrated	14	13	92	94	152.1	138.3
Transmission charges and other expenses	258	290				
<b>Total</b>	<b>\$ 4,407</b>	<b>\$ 5,162</b>	<b>73 500</b>	<b>77 231</b>	<b>\$ 60.0</b>	<b>\$66.8</b>

The mix of the sources of supply are impacted by variables such as the market price of energy, water inflows, reservoir levels, energy demand and environmental and social impacts.

## Energy Costs

(in millions)	2002	2001	Change
	<b>\$4,407</b>	\$5,162	\$ 755
Changes:			
Lower electricity and gas purchase prices			\$895
Lower hydro generation and corresponding increase in energy purchases			(675)
Lower sales volumes			510
Lower transmission charges			30
Other			(5)
			<b>\$ 755</b>

Energy costs of \$4,407 million decreased by \$755 million from the same period last year. This decrease was primarily due to:

### A decrease in the price of electricity and gas purchases

The combined average price of electricity and gas purchases in fiscal 2002 decreased by approximately 20 per cent from the prior year. Energy purchases are largely used for future resale during higher-priced periods in the electricity trade market.

### A decrease in hydro generation and corresponding increase in the total volume of electricity and gas purchases

The availability of low-cost hydro generation has a significant impact on energy costs. The variable cost of hydro generation is substantially less than the cost of electricity purchases or natural gas purchases, used primarily for the operation of the Burrard Generating Station. Hydro generation declined by 12 per cent this year, mainly due to a reduction in the level of water inflows into BC Hydro's reservoirs. Water inflows were 88 per cent of normal this year compared to 97 per cent of normal in the prior year, necessitating an increase in energy purchases to meet demand. The lower than normal reservoir levels at the start of the year also contributed to the

increase in energy purchases. Reservoir levels at the end of this year, while still below normal levels, are higher than at the end of the prior year.

The lower level of water inflows during the year contributed to BC Hydro being in a net import position of approximately 5200 GW·h for the year compared to a net import position of approximately 1700 GW·h in the prior year. Imports, when economic, are used to supplement BC Hydro generation in meeting domestic load requirements and are also used for future resale in the electricity trade market. Approximately 2000 GW·h of the net imports in fiscal 2002 will be used for resale in future periods.

#### A decrease in sales volumes

Total sales volumes were five per cent or 3564 GW·h lower than the prior year, with over 90 per cent of the decrease relating to a reduction in electricity trade demand.

#### A decrease in electricity trade transmission costs

This decrease of approximately 10 per cent from the prior year was primarily due to the reduction in electricity trade activity.

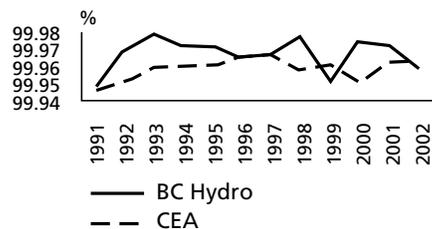
#### Operations, Maintenance and Administration

Operations, maintenance and administration (OMA) expenses of \$550 million for the 12 months ended March 31, 2002, were \$205 million lower than for the same period last year. The higher than normal OMA expenses of the prior year were primarily due to one-time costs including the provision to cover the exposure to uncollectible receivables from California trade partners. Non-recurring provisions made in the prior year for environmental remediation and PCB destruction costs also contributed to the higher OMA costs of the prior year. Excluding the one-time costs of the prior year, OMA expenses in fiscal 2002 were approximately five per cent higher than last year. This increase was primarily caused by non-controllable factors such as an increase in maintenance and

emergency repair costs due to a failed unit at the Burrard Generating Station and to an increase in legal and other associated costs regarding electricity trade activities related to California.

BC Hydro continues to invest in programs and initiatives designed to increase efficiencies and add value to its customers and shareholder. The move to the Lines of Business organization structure together with targeted cost reductions will help BC Hydro achieve its objective of top quartile cost performance.

#### Average System Availability Index (ASAI)



The ASAI is a measure of system reliability. BC Hydro's ASAI has remained stable and is consistently better than the Canadian Electricity Association (CEA) composite. In 2001/02, BC Hydro's index was lower than the CEA composite because of adverse weather conditions in British Columbia. ASAI was heavily impacted by the December 14–16, 2001 windstorm that hit the Lower Mainland and Vancouver Island regions. The three-day storm accounted for 36 per cent of total customer hours lost during the 12-month period. Other major events included the May 28, 2001 windstorm that affected almost the entire province and the October 22–23, 2001 windstorm in the Lower Mainland and Vancouver Island regions.

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## Depreciation and Amortization

Depreciation and amortization expenses were \$386 million, compared with \$380 million for the previous year. The increase primarily reflects more assets in service due to customer growth.

## Finance Charges

(millions of dollars)	2002	2001	Change
	<b>\$544</b>	\$559	\$ 15
Changes:			
Interest rates			\$ 68
Foreign exchange			(42)
Sinking fund			(18)
Volume			4
Other			3
			<b>\$ 15</b>

Finance charges for the 12 months ended March 31, 2002 of \$544 million were \$15 million lower than the same period last year. Lower short-term interest rates were the primary reason for the decrease. Canadian interest rates on variable rate debt declined by 60 per cent from an average of 5.64 per cent in 2001 to 3.53 per cent in 2002. The impact of a weaker Canadian dollar vis-à-vis the U.S. dollar partly offset the favourable variance. BC Hydro maintains a portion of its core debt portfolio in U.S. dollars primarily to match U.S. dollar revenues from electricity trade sales.

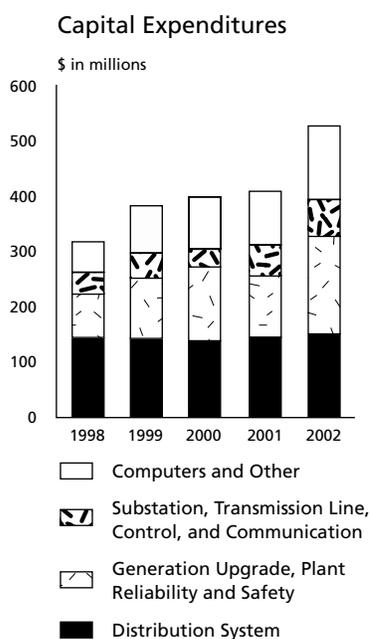
### Customer Profit Sharing

In the prior year, the Province directed BC Hydro to pay its residential tariff customers, UtiliCorp Networks Canada (formerly West Kootenay Power) and the Corporation of the City of New Westminster payments equal to \$200 per residential customer. These payments totalled \$310 million for fiscal 2001. There were no similar payments in fiscal 2002.

### Transfer from Rate Stabilization Account

The Rate Stabilization Account (RSA) is used to mitigate the impact of fluctuating earnings on customers. In years when BC Hydro's actual return on equity is in excess of that allowed by the British Columbia Utilities Commission, a transfer is made from income into the RSA. In lower income years when BC Hydro's return on equity is below that allowed, a transfer is made from the RSA, if there is a balance, to offset any rate increase that may be needed to allow BC Hydro to earn its allowed return on equity. The transfer **from** the RSA was \$145 million in 2002 compared to a transfer **to** the RSA of \$103 million in the prior year. The balance in the RSA account at the end of fiscal 2002 totalled \$87 million.

## Capital Expenditures



The total of BC Hydro's capital expenditures, excluding demand-side management programs, was \$531 million in fiscal 2002, an increase of \$119 million from the previous year. Demand-side management program costs amounted to \$14 million, \$13 million higher than the prior year.

Generation upgrade, plant reliability and safety projects accounted for \$170 million in expenditures for the 12 months ended March 31, 2002, an increase of approximately \$57 million from the same period in the prior year. Distribution system expansion and improvements to service customer growth accounted for \$154 million in expenditures for the 12 months ended March 31, 2002, which increased by \$9 million compared to the same period in the previous year. The remaining capital expenditures of \$206 million relating to transmission line, substation, computer and control and communication projects were approximately \$53 million higher than in the prior year.

Generation upgrade costs include \$24 million for the Burrard Upgrade Project, a necessary expenditure to comply with regulatory requirements and to retain

the plant's energy supply capability. The 912 MW natural gas-fired conventional thermal facility provides up to 12 per cent of BC Hydro's firm supply and has been undergoing a major upgrade since 1994. The fiscal 2002 expenditures at Burrard Generating Station consisted of mandatory health, safety and regulatory upgrades to the plant in general. Burrard Upgrade project costs have totalled \$176 million from 1994 to 2002. A majority of these expenditures relate to installing Selective Catalytic Reduction (SCR) systems. The SCRs are the first to be installed on utility boilers in Canada and are achieving a 90 per cent reduction in emissions of nitrogen oxide (NO<sub>x</sub>) from the ISO14001-registered plant.

Generation upgrade costs also include \$32 million for the Seven Mile Unit 4 project which involves the design, supply, and installation of a fourth generating unit at BC Hydro's Seven Mile dam and powerhouse on the Pend d'Oreille River near Trail. The fourth generating unit will add an additional 210 MW of capacity on the existing 594 MW plant. The energy produced will displace future thermal generation and thereby reduce greenhouse gas emissions. The 2002 expenditures consisted of preparations for the installation of the hydraulic turbine embedded steelwork. The Seven Mile Unit 4 project has a projected in-service date of the spring of 2003.

Expenditures also include costs for the Georgia Strait Crossing Project (GSX), which is a joint project by BC Hydro and Williams Gas Pipeline Company (Williams) to build a pipeline to transport natural gas from the supply hub at Sumas, Washington to Vancouver Island. This pipeline will cross the Strait of Georgia and connect to an existing pipeline on Vancouver Island to supply generating plants on Vancouver Island and supply other Vancouver Island markets. The 2002 expenditures of \$8 million for the GSX project relate to the filing of the application to the National Energy Board (NEB) and Federal Energy Regulatory Committee (FERC). Construction of the pipeline is expected to be completed by the fall of 2004. GSX will also supply gas to BC Hydro's

planned Vancouver Island Generation Project, which involves building a new natural gas power generation plant. The proposed site for this plant is at Duke Point near the City of Nanaimo. This 265 MW plant is expected to be in service in November 2004. To date \$23 million has been spent. The GSX pipeline and new generation plant will help ensure the continued reliable supply of energy for Vancouver Island residents.

Transmission line costs include \$10 million for the installation of 2L39 and preparation for the replacement of 2L40 underground transmission cable circuits. These circuits are part of the metropolitan area grid which provides supply to South Burnaby, New Westminster and South Vancouver areas. These cables were originally installed in the late 1950s and had reached the end of their design life and needed to be replaced. Costs for 2L40 included the purchase of a cable circuit along with accessories and the completion of the design and tender for civil construction. The installation of the 2L40 cable circuit is expected to be completed by September 2002.

Computer hardware and software expenditures increased by \$24 million over fiscal 2001 primarily due to increased expenditures relating to the implementation of an Enterprise Resource Planning (ERP) package based on PassPort and PeopleSoft applications.

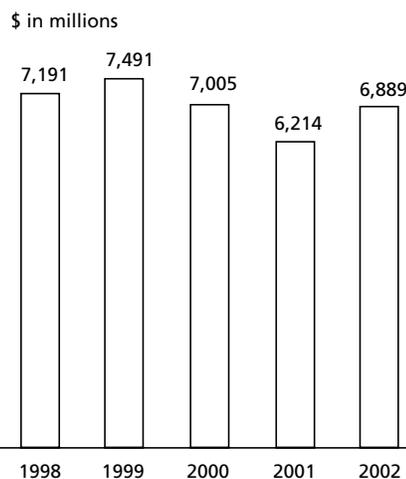
### Long-Term Debt

Long-term debt, net of sinking funds and temporary investments, was \$6,889 million as at March 31, 2002, compared with \$6,214 million as at the end of the prior year, an increase of \$675 million. Lower cash flows as a result of a decrease in electricity trade activity and the impact of low water inflows, an increase in capital expenditures and the timing of the payment of accounts payable contributed to the increase in debt. The accounts payable and accrued liabilities balance at March 31, 2002 was \$708 million compared to \$1,121 million at March 31, 2001.

During the year, BC Hydro redeemed four Canadian and three U.S. bonds totalling \$622 million. These redemptions were financed through the issuance of four new Canadian bond issues totalling \$350 million, together with an increase in revolving borrowings and a reduction of sinking funds. The weighted average interest rate on the redeemed bonds was approximately 12 per cent compared to six per cent for the new bond issues.

BC Hydro continues to actively manage its debt portfolio in order to meet its objective of reducing its overall cost of debt within acceptable levels of risk. In order to meet this objective, BC Hydro maintains direct exposure to both Canadian and U.S. dollars at fixed and floating interest rates, and employs various strategies. These strategies include the use of cross-currency and interest rate swaps to rebalance its debt portfolio to its optimal position.

### Net Long-Term Debt



Consists of long-term debt, including the current portion, net of sinking funds and temporary investments. Long-term debt has decreased by approximately \$300 million in the last five years.

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## Payment to the Province

(dollar amounts in millions)	2002	2001
Actual return on equity	15.24 %	16.59 %
Allowed return on equity <sup>1</sup>	15.24 %	16.59 %
Payment to the Province	\$333	\$372

<sup>1</sup>BC Hydro's allowed 1995 rate of return was approved by the British Columbia Utilities Commission in its last rate decision of November 24, 1994. The following years' rates of return were calculated by BC Hydro using the same method as in 1995. The allowed return on equity has been calculated to equal, on a pre-income tax basis, that of the most comparable investor-owned utility.

BC Hydro is required to make an annual Payment to the Province equal to 85 per cent of its distributable surplus. Distributable surplus is calculated as consolidated net income adjusted for interest during construction and related depreciation.

BC Hydro's Payment to the Province decreased to \$333 million for fiscal 2002 from \$372 million in the previous year due largely to the decrease in the net income needed to meet the "allowed" return on equity. The "allowed" return on equity declined from 16.59 per cent in fiscal 2001 to 15.24 per cent in fiscal 2002.

In addition to the above payment, BC Hydro paid \$394 million in water rentals, school taxes, grants and capital tax to provincial and municipal governments in fiscal 2002.

## Business Risks and Uncertainties

BC Hydro is subject to various risks and uncertainties that cause significant volatility in its earnings. Factors such as the level of water inflows into its reservoirs, market prices for electricity and natural gas, interest rates, foreign exchange rates, weather and regulatory and government policies influence both the operation of the BC Hydro system and its earnings. While these risks cannot be eliminated, as they are largely non-controllable, some may be mitigated to a certain degree. The key risks and uncertainties BC Hydro faces include:

### 1. Water inflows into reservoirs and impact on hydro generation

BC Hydro's net income is significantly influenced by the level of water inflows into its reservoirs. High levels of water inflows into BC Hydro's reservoirs allow for a greater proportion of energy demand to be met using low-cost hydro generation in place of higher-priced energy purchases, thereby reducing the cost of energy and increasing net income. The unit cost of energy purchases in fiscal 2002 was on average more than 25 times greater than the variable

unit cost of hydro generation. High inflows can also create surplus energy not required to meet domestic demand. This energy can be sold at favourable profit margins on the electricity trade market. As the amount of inflows can fluctuate significantly from year to year, BC Hydro faces challenges in operating its system to try to minimize the impact of low water years on net income. BC Hydro continues to optimize energy management through the appropriate mix of self-generation and energy imports, depending on water inflows and fluctuating economic and market conditions.

### 2. Energy market prices and export margins

Export revenues and margins are directly affected by market prices, as are short-term energy purchases related to both domestic and electricity trade. Market prices also affect a number of decisions, including whether it is more economical to generate hydro or thermal electricity; whether to purchase energy during specific time periods; and when to sell energy in the export market. Market prices that are relevant to BC Hydro are strongly influenced by market

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conditions in the Pacific Northwest and in California, where the majority of BC Hydro's electricity trade transactions occur. Factors such as the level of water inflows, gas prices, unit outages and weather conditions in the Pacific Northwest and California all influence the market price, market spreads and export margins. Any change in market prices could have a significant impact on BC Hydro's electricity trade revenues, cost of energy and, ultimately, net income. As a general rule, higher margins can be earned when the market is more volatile and market prices are higher.

### **3. Interest rates and foreign exchange rates**

As with most utilities, BC Hydro is a highly debt-leveraged, capital-intensive company. Changes in interest and foreign exchange rates can therefore have a significant impact on finance charges. BC Hydro uses several debt-management strategies to minimize the impact of interest rate and foreign exchange rate fluctuations; however, these fluctuations can still exert a significant influence on finance charges. Some of the debt-management strategies employed by BC Hydro include the use of foreign currency agreements to minimize foreign exchange risk and the management of fixed- and floating-rate debt within acceptable risk levels in order to minimize interest rate risk.

### **4. Weather**

Weather has a significant impact on residential revenues, particularly in the months of December to February. It is estimated that if temperatures are five per cent warmer or colder than normal, residential revenues will decline or increase by three per cent respectively. BC Hydro minimizes the impact of lost domestic sales resulting from warmer than normal weather by increasing reservoir levels, if practical, or by selling the energy in the export market.

### **5. Continued access into export markets**

The import and export of energy is a significant aspect of BC Hydro's business. Continued access into export markets is vital for the company's ongoing success. In order to transact in the Alberta and U.S. electricity marketplace, BC Hydro has offered open and non-discriminatory transmission access at the wholesale level since 1996. As a result, BC Hydro can sell electricity directly to Alberta and U.S. wholesale customers, and our U.S. competitors can sell electricity to wholesale customers within B.C., as well as transmit electricity through B.C. and into Alberta. While BC Hydro's trade activities have increased significantly since the opening up of the wholesale market, sales to wholesale customers within B.C. by our competitors have been minimal due to our favourable competitive position.

BC Hydro will also have to continue to maintain and improve bidirectional transmission capacity between its system and other markets in order to continue to maximize the value of the BC Hydro system.

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## Sensitivity Analysis

The following table shows the effect on earnings of changes in some key variables. The analysis is based on business conditions and production volumes in fiscal 2002. Each separate item in the sensitivity assumes the others are held constant. While these sensitivities are applicable to the period and magnitude of changes on which they are based, they may not be applicable in other periods, under other economic circumstances or greater magnitude of changes.

Factor	Change	Approx. change in earnings (\$ millions)
Hydro generation <sup>1</sup>	1000 GW·h	120
Electricity trade margins	\$1/MW·h	20
Interest rates	100 basis points	25
Exchange rate (U.S. \$ per Cdn. \$) <sup>2</sup>	U.S. \$0.01	5
Weather	5% warmer/colder	5

<sup>1</sup> Assumes change in hydro generation is offset by corresponding change in energy imports (i.e., increase in hydro generation is offset by decrease in energy imports). Approximately 40 500 GW·h of electricity was produced using hydro generation in fiscal 2002.

<sup>2</sup> In December 2001, the CICA amended its standard on foreign currency translation. The changes, effective fiscal 2003, require that translation gains and losses arising on long-term foreign currency denominated monetary items be included in income in the current period. Previously, these gains and losses had generally been amortized over the life of the related item. As a result of this change, the impact on BC Hydro's earnings from a change in foreign exchange rates may be different than shown in the table above.

In addition to the risks and sensitivities, it is important to put BC Hydro's financial performance in the context of the key income statement elements over which BC Hydro has control. Many key elements of BC Hydro's financial structure are largely non-controllable.

Element	Non-controllable	Semi-controllable	Controllable
Domestic revenues	Impact of weather (residential), overall economy (commercial and industrial), and strikes		Reduction in domestic sales through demand-side management programs  Miscellaneous revenues through surplus property and asset sales  Non-tariff revenue opportunities
Electricity trade	Prices, tie-line capacity, net export/import position as impacted by level of inflows (primarily affected by snowpack)		Optimization of system to maximize low-cost imports and high-price exports  Level of off-system sales (energy purchases and sales, neither of which enter the BC Hydro system)
Energy costs	Availability of low-cost hydro generation as impacted by level of inflows (snowpack), electricity and gas prices		Use of Burrard Generating Station, amount of reservoir draw-down, and timing of maintenance
Operations, maintenance and administration expenses		Labour costs in the short-term	Discretionary spending and longer-term staffing levels (efficiency initiatives)
Taxes	Covered by legislation		
Depreciation	On existing assets	On assets crucial to maintain the reliability of the overall electric system	On new assets (level of new expenditures)
Finance charges	Interest rates and foreign exchange rates	Volume of debt (level of capital expenditures)	Level of U.S. debt, balance of variable vs. fixed debt

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## Risk Management

As part of its normal business activities, BC Hydro is exposed to a number of financial risks including commodity market risk; credit risk, particularly with respect to its electricity trade activities; and interest rate and foreign currency risk related to electricity trade and financing arrangements. While these risks generally cannot be eliminated, BC Hydro manages its financial risks within a range of risk tolerance established through Board-approved policies and risk limits, as well as management oversight, risk reporting and internal controls.

BC Hydro's Risk Management Policy specifies a risk philosophy, a statement of risk accountability and the processes by which the corporation establishes tolerable risk levels and manages to them. The Policy incorporates limits for export trading, and addresses the provision of energy to domestic customers, insurable risks, safety and environmental responsibility.

BC Hydro's Risk Management Committee (RMC) is comprised of financial and operational executives of the company. The RMC is primarily responsible for establishing and assessing the appropriateness of changes to risk management policies prior to approval by the Board of Directors. The RMC also provides oversight to risk control processes to ensure that financial risks are appropriately assessed, controlled and reported, and that risk management policies and limits are adhered to.

### Commodity Market Risk

Commodity market risk is the risk of economic losses resulting from adverse changes in the market price of commodities involved in the generation or sale of electricity. BC Hydro's commodity market risk is mainly represented by the exposure to price changes in electricity and natural gas markets in western North America. Market risks arise through BC Hydro's purchasing of electricity and natural gas to support domestic electricity requirements, as well as through sales of electricity in the western United States and Canada.

BC Hydro's risk management policies are intended to ensure the availability of energy for domestic requirements, and to optimize the value associated with BC Hydro's investment in generation assets. Market risk exposure is controlled through limits on the financial risk associated with transactions in authorized products or geographic regions, inclusive of the risk associated with unsettled transactions. Commodity market risk is also controlled through financial limits on the total market exposure to transactions which are not backed by BC Hydro's generation system.

### Credit Risk

Credit risk arises when BC Hydro relies on other parties to honour or perform contractual obligations which have economic value to BC Hydro. This includes non-payment of balances owed to BC Hydro, as well as non-performance on contractual obligations having prices that are favourable to BC Hydro. Credit risk arises through most of BC Hydro's activities; however, with the greatest exposure arising through its electricity trade activities and its long-term power purchase contracts.

BC Hydro manages credit risk through Board-approved policies, as well as individual credit limits, which reflect the creditworthiness of its counterparties. The policies and credit limits are intended to limit concentrations of credit risk that may arise with respect to specific customer segments, as well as to geographic regions that may be similarly affected by changing economic, political or other considerations. However, as the number of participants and potential markets are limited, concentrations of credit risk related to electricity trade activities may arise. Where opportunities are available, these concentrations of risk are mitigated through various risk mitigation techniques including collateral, netting arrangements and insurance.

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### **Interest Rate Risk**

Interest rate risk arises from potential changes in interest rates, and the associated impact on BC Hydro's cost of borrowing. At March 31, 2002, approximately \$1,765 million or 26 per cent of net debt was subject to interest rate reset risk during the next fiscal year. Interest rate risk is managed through Board-approved policies, which require the debt portfolio to be managed using an appropriate blend of fixed and floating rate debt, as well as by managing the term to maturity of its debt portfolio to manage exposure to interest rate movements in the future. BC Hydro utilizes financial instruments, including interest rate swaps and options, to adjust the balance of fixed and floating rate debt, and to reduce its overall cost of borrowing.

### **Foreign Currency Risk**

Foreign currency risk relates to potential changes in foreign currency rates, and the impact that this may have on BC Hydro's assets and obligations. The majority of BC Hydro's foreign currency risk results

from exposure to changes in United States currency. In the normal course of its business, BC Hydro is exposed to foreign currency movements through electricity trade activities, which are mainly transacted in the United States; through its debt portfolio, which includes a component of foreign currency denominated debt; and through currency exchange fluctuations on imported equipment. Foreign currency risk is managed through policies and limits which are approved by the Board of Directors.

Some of BC Hydro's exposure to foreign currency movements is reduced through its normal business activities, as BC Hydro is required to settle many of its transactions through payment or receipt of amounts in foreign currency. For example, as a component of BC Hydro's debt portfolio is denominated in U.S. dollars, this allows the matching of U.S. dollar interest payments with U.S. dollar receipts from electricity trade activities. BC Hydro manages its remaining foreign exchange risk using a variety of financial instruments including foreign currency swaps, options and futures contracts.

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## 2003 Future Outlook

BC Hydro is projecting an improvement in its net income before Rate Stabilization Account transfers from \$258 million in 2002 to \$350 million in 2003. The increase is primarily due to a projected improvement in water inflow conditions, which allows for an increase in low-cost hydro generation in place of higher-cost sources of supply to meet demand. Water inflow levels are projected to be 106 per cent of normal levels based on current snowpack levels, compared to inflows in fiscal 2002 which averaged 88 per cent of normal. Net income is projected to start to decline by fiscal 2005 due to a projected decline in electricity trade margins as the market matures, and to an increase in energy costs necessary to meet domestic load requirements.

The estimated earnings outcome for fiscal 2003 of \$350 million is based on current cost and revenue drivers and the impact that cost reduction and/or revenue enhancement initiatives will have on these drivers. BC Hydro's earnings can fluctuate significantly due to various non-controllable factors such as the level of water inflows, market prices for electricity and natural gas, weather temperatures, interest rates and foreign exchange rates. It is estimated that the net income forecast can fluctuate by approximately plus \$400 million or minus \$250 million per year under various plausible scenarios.

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## MANAGEMENT REPORT

The consolidated financial statements of British Columbia Hydro and Power Authority (BC Hydro) are the responsibility of management and have been prepared in accordance with Canadian generally accepted accounting principles, consistently applied and appropriate in the circumstances. The preparation of financial statements necessarily involves the use of estimates which have been made using careful judgement. In management's opinion, the consolidated financial statements have been properly prepared within the framework of the accounting policies summarized in the consolidated financial statements and incorporate, within reasonable limits of materiality, all information available at May 17, 2002. The consolidated financial statements have also been reviewed by the Audit & Risk Management Committee and approved by the Board of Directors. Financial information presented elsewhere in this Annual Report is consistent with that in the consolidated financial statements.

Management maintains systems of internal controls designed to provide reasonable assurance that assets are safeguarded and that reliable financial information is available on a timely basis. These systems include formal written policies and procedures, careful selection and training of qualified personnel and appropriate delegation of authority and segregation of responsibilities within the organization. An internal audit function independently evaluates the effectiveness of these internal controls on an ongoing basis and reports its findings to management and the Audit & Risk Management Committee.

The financial statements have been examined by independent external auditors. The external auditors' responsibility is to express their opinion on whether the financial statements, in all material respects, fairly present BC Hydro's financial position, results of operations and cash flows in accordance with Canadian generally accepted accounting principles. The Auditors' Report, which follows, outlines the scope of their examination and their opinion.

The Board of Directors, through the Audit & Risk Management Committee, is responsible for ensuring that management fulfills its responsibility for financial reporting and internal controls. The Audit & Risk Management Committee, comprised of directors who are not employees, meets regularly with the external auditors, the internal auditors and management to satisfy itself that each group has properly discharged its responsibility to review the financial statements before recommending approval by the Board of Directors and appointment of external auditors. The internal and external auditors have full and open access to the Audit & Risk Management Committee, with and without the presence of management.



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



Michael Costello  
*President and Chief Operating Officer*



Bob Elton  
*Executive Vice-President Finance  
and Chief Financial Officer*

*Vancouver, Canada  
May 17, 2002*

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## AUDITORS' REPORT

The Lieutenant Governor in Council, Province of British Columbia:

We have audited the consolidated balance sheet of British Columbia Hydro and Power Authority as at March 31, 2002 and the consolidated statements of operations, retained earnings and cash flows for the year then ended. These financial statements are the responsibility of British Columbia Hydro and Power Authority's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of British Columbia Hydro and Power Authority as at March 31, 2002 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.



Ernst and Young LLP  
*Chartered Accountants*

*Vancouver, Canada*  
*May 17, 2002*

## CONSOLIDATED STATEMENT OF OPERATIONS

<i>for the years ended March 31 (in millions)</i>	2002	2001
<b>Revenues</b>		
Domestic		
Residential	\$ 930	\$ 892
Light industrial and commercial	874	866
Large industrial	482	524
Other energy sales	89	90
Miscellaneous	75	59
	2,450	2,431
Electricity trade	3,861	5,458
	6,311	7,889
<b>Expenses</b>		
Energy costs (Note 2)	4,407	5,162
Operations, maintenance and administration	550	755
Depreciation and amortization (Note 3)	386	380
Taxes (Note 4)	166	174
	5,509	6,471
<b>Income before Finance Charges, Customer Profit Sharing and Transfer to/from Rate Stabilization Account</b>	802	1,418
Finance charges (Note 5)	544	559
<b>Income before Customer Profit Sharing and Transfer to/from Rate Stabilization Account</b>	258	859
Customer profit sharing (Note 6)	–	310
<b>Income before Transfer to/from Rate Stabilization Account</b>	258	549
Transfer to (from) Rate Stabilization Account	(145)	103
<b>Net Income</b>	\$ 403	\$ 446

## CONSOLIDATED STATEMENT OF RETAINED EARNINGS

<i>for the years ended March 31 (in millions)</i>	2002	2001
Retained earnings, beginning of year	\$ 1,459	\$ 1,385
Net income	403	446
Payment to the Province (Note 1)	(333)	(372)
<b>Retained Earnings, end of year</b>	\$ 1,529	\$ 1,459

See accompanying notes to consolidated financial statements.

## CONSOLIDATED BALANCE SHEET

<i>as at March 31 (in millions)</i>	2002	2001
<b>Assets</b>		
<b>Capital Assets (Note 7)</b>		
Capital assets in service	\$ 14,608	\$ 14,323
Less accumulated depreciation	5,557	5,256
	9,051	9,067
Unfinished construction	459	294
	9,510	9,361
<b>Current Assets</b>		
Temporary investments	17	686
Accounts receivable and accrued revenue (Note 11)	409	345
Materials and supplies	88	81
Prepaid expenses	111	82
Unrealized gains on mark-to-market transactions	19	113
	644	1,307
<b>Other Assets and Deferred Charges</b>		
Sinking funds (Note 8)	1,073	1,148
Demand-side management programs	103	116
Deferred debt costs (Note 9)	587	633
Foreign currency contracts (Notes 10 and 11)	32	28
Other	17	22
	1,812	1,947
	\$ 11,966	\$ 12,615
<b>Liabilities and Equity</b>		
Long-term debt net of sinking funds	\$ 6,276	\$ 6,485
Sinking funds presented as assets	1,073	1,148
<b>Long-Term Debt (Note 10)</b>	7,349	7,633
<b>Foreign Currency Contracts (Notes 10 and 11)</b>	16	9
<b>Current Liabilities</b>		
Current portion of long-term debt (Note 10)	630	415
Accounts payable and accrued liabilities	708	1,121
Accrued interest	107	124
Accrued Payment to the Province (Note 1)	333	372
Unrealized losses on mark-to-market transactions	17	108
	1,795	2,140
<b>Deferred Credits and Other Liabilities</b>		
Provision for future removal and site restoration costs	159	144
Deferred revenue	238	217
Rate Stabilization Account	87	232
Contributions in aid of construction	581	560
Contributions arising from the Columbia River Treaty	212	221
	1,277	1,374
Retained Earnings	1,529	1,459
	\$ 11,966	\$ 12,615

### Commitments and Contingencies (Notes 8, 10, 11 and 13)

See accompanying notes to consolidated financial statements.

Approved on behalf of the Board:



L.I. (Larry) Bell  
Chair and Chief Executive Officer



Alice Laberge  
Chair, Audit & Risk Management Committee

## CONSOLIDATED STATEMENT OF CASH FLOWS

<i>for the years ended March 31 (in millions)</i>	2002	2001
<b>Operating Activities</b>		
Net income	\$ 403	\$ 446
Adjustments for:		
Depreciation and amortization	386	380
Transfer to (from) Rate Stabilization Account	(145)	103
Other non-cash items	27	(10)
	671	919
Working capital changes	(458)	659
<b>Cash provided by operating activities</b>	<b>213</b>	<b>1,578</b>
<b>Investing Activities</b>		
Capital asset expenditures	(604)	(375)
Contributions in aid of construction	54	44
Demand-side management programs	(14)	(1)
Future removal and site restoration costs	(6)	(7)
Other	10	1
<b>Cash used for investing activities</b>	<b>(560)</b>	<b>(338)</b>
<b>Financing Activities</b>		
Bonds, notes and debentures		
Issued	350	450
Retired	(622)	(179)
Revolving borrowings	173	(504)
Sinking funds	139	(3)
Deferred debt costs	8	17
Settlement of financial instruments	2	3
<b>Cash provided by (used for) financing activities</b>	<b>50</b>	<b>(216)</b>
<b>Payment to the Province (Note 1)</b>	<b>(372)</b>	<b>(343)</b>
<b>Increase (decrease) in cash</b>	<b>(669)</b>	<b>681</b>
<b>Cash at beginning of year</b>	<b>686</b>	<b>5</b>
<b>Cash at end of year</b>	<b>\$ 17</b>	<b>\$ 686</b>
<b>Supplemental disclosure of cash flow information</b>		
Interest paid	\$ 585	\$ 642

Cash consists of temporary investments.  
See accompanying notes to consolidated financial statements.

## SIGNIFICANT ACCOUNTING POLICIES

### Purpose

British Columbia Hydro and Power Authority ("BC Hydro"), established in 1962 as a Crown corporation of the Province of British Columbia (the "Province") by enactment of the Hydro and Power Authority Act, has a corporate mission to provide integrated energy solutions to its customers in an environmentally and socially responsible manner. BC Hydro is subject to regulation (see Note 1) by the British Columbia Utilities Commission (the "Commission") which, among other things, approves the rates BC Hydro charges for its services.

BC Hydro owns and operates electric generation, transmission and distribution facilities in the province of British Columbia.

### Consolidation

The consolidated financial statements include the financial statements of BC Hydro and its principal wholly owned operating subsidiaries British Columbia Hydro International Limited, Powerex Corp. ("Powerex"), Powertech Labs Inc. and Westech Information Systems Inc.

### Revenues

Domestic revenues comprise sales to customers within the province and sales of firm energy to those outside the province under long-term contracts which are reflected in BC Hydro's domestic load requirements. Other sales outside the province are classified as electricity trade.

Revenue is recognized on the basis of cyclical billings and also includes electricity deliveries not yet billed.

### Foreign Currency Translation

Foreign currency denominated revenues and expenses are translated into Canadian dollars at the rate of exchange in effect at the transaction date.

Foreign currency denominated monetary assets and

liabilities are translated into Canadian dollars at the rate of exchange prevailing at the balance sheet date.

Gains and losses arising from the translation of long-term debt are deferred and amortized over the remaining term of the debt. Annual amortization is determined using a reverse sum-of-remaining-years amortization method, with straight-line amortization in the last four years.

Where foreign currency denominated long-term debt is refinanced in the same currency, any unamortized foreign currency translation gains and losses associated with the refinanced debt are amortized over the shorter of the term to maturity of the new debt or the refinanced debt. Where partial refinancing occurs in the same currency, the unamortized foreign currency translation gains or losses continue to be deferred and amortized on a pro rata basis. Where foreign currency denominated long-term debt is refinanced in a different currency, any unamortized foreign currency translation gains or losses are included in finance charges at the refinancing date.

### Depreciation

Capital assets in service are depreciated on an individual or a pooled basis over the expected useful lives of the assets, generally using the straight-line method.

The expected useful lives, in years, of BC Hydro's main classes of capital assets are:

Generation	
Hydraulic	50 – 100
Thermal	10 – 50
Distribution	30 – 50
Transmission lines	35 – 100
Substations	20 – 50
Buildings	45 – 50
Equipment	3 – 20
Service vehicles	7 – 20
Sundry	20 – 45

### Finance Charges Capitalized

Finance charges are capitalized on construction in progress at rates equivalent to BC Hydro's average annual cost of borrowing (2002 – 5.82 per cent, 2001 – 6.76 per cent). The rate takes into consideration annual interest costs plus foreign exchange adjustments and amortization of premiums, discounts and issue costs.

### Capital Assets

Capital assets in service are recorded at cost which includes materials, direct and indirect labour, an appropriate allocation of administration overhead and finance charges capitalized during construction. Capital assets in service include the cost of plant financed by contributions in aid of construction and contributions arising from the Columbia River Treaty. Upon retirement or disposal, any gain or loss is charged to income for assets depreciated on an individual basis, or to accumulated depreciation for assets depreciated on a pooled basis.

Unfinished construction consists of construction in progress and the unamortized balance of studies and abandoned or indefinitely deferred projects. The balance includes materials, direct and indirect labour, finance charges capitalized and an appropriate allocation of administration overhead. Costs of construction in progress are transferred to capital assets in service when the asset is substantially complete and capable of operation at a significant level of capacity.

Costs of studies and abandoned or indefinitely deferred projects are deferred and amortized on a straight-line basis over five years where it is management's intention to recover the costs through future rates. If the costs of an abandoned or indefinitely deferred project will not be recovered through continuing operations, the costs related to the project, including overhead and interest during construction, are expensed immediately.

### Temporary Investments

Temporary investments consist of cash and units of the short-term unitized bonds held with the Province and 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 to net realizable value.

### Mark-to-Market

BC Hydro follows mark-to-market accounting to value certain trading activities. Under mark-to-market accounting, these trade positions are recorded at fair value. Changes in the fair value of open positions, which result primarily from new transactions and the impact of price movements, are recognized as gains or losses in operating revenue in the period of change. The resulting unrealized gains and losses are recorded as trading assets and liabilities. The market prices used to determine fair value reflect management's best estimates considering various factors including closing exchange and over-the-counter quotations, time value and volatility factors. However, it is possible that future market prices could vary from those used in recording the assets and liabilities, and such variations could be material. Revenues and cost of purchases associated with energy marketing and trading transactions, which meet the criteria for hedges, are recognized at the time of delivery of the underlying commodity.

### Demand-side Management Programs

Demand-side management ("DSM") programs comprise programs designed to reduce the energy requirements on BC Hydro's system.

Expenditures on DSM programs, including materials, direct labour and applicable portions of administration charges, equipment costs, program costs and incentives, are deferred and amortized on a straight-line basis over 10 years, except for project feasibility studies which are expensed as incurred.

Incentives provided to assist in the construction of third-party electric generation facilities are deferred and amortized on a straight-line basis over the expected period of operation of the facilities.

#### **Deferred Debt Costs**

Discount and issue costs arising from debt issues are deferred and amortized on a straight-line basis over the remaining term of the debt. Premiums paid to call existing debt are deferred and amortized over the term to maturity of the new debt.

#### **Derivative Financial Instruments**

BC Hydro uses derivative financial instruments, principally interest rate and foreign currency swaps, options and forward rate agreements, solely to manage interest rate and foreign exchange risks related to debt.

Payments and receipts under interest rate and cross currency swap contracts are recognized as adjustments to finance charges. Gains and losses on terminated derivative interest rate and cross currency swaps, options and forward rate agreements are deferred and amortized over the remaining term of the related contracts.

#### **Fair Value**

The fair value of bonds, notes and debentures, and sinking funds reflects changes in the general level of interest rates that have occurred since inception. The fair value of bonds, notes and debentures is based on quoted market values or, where no such information is available, is determined by discounting the expected future cash flows of this debt at market rates for debt with similar terms and conditions. The fair value of sinking fund assets is determined by discounting the expected future cash flows of these assets at market rates for assets with similar terms and conditions.

The fair value of a derivative financial instrument reflects the amount that BC Hydro would receive (or pay) to terminate these instruments at the balance sheet date. The fair value of over-the-counter derivative contracts is determined using pricing models, which take into account market prices and contractual prices of the underlying instruments, as well as time value, yield curve and volatility factors underlying the positions.

#### **Sinking Funds**

Sinking funds are held as individual portfolios or units in a pooled bond fund. Securities included in an individual portfolio are recorded at cost, adjusted by amortization of any discounts or premiums arising on purchase on a yield basis over the estimated term to settlement of the security. Realized gains and losses are included in sinking fund income. Unrealized gains and losses are not recognized.

Units in the pooled bond fund are recorded at cost, adjusted by amortization of any realized and unrealized gains and losses on a straight-line basis over the weighted average term to maturity of the related debt portfolio.

Foreign currency translation gains and losses are deferred and amortized over the weighted average term to maturity of the related debt portfolio.

#### **Future Removal and Site Restoration Costs**

Provisions for the costs net of expected recoveries for future removal and site restoration arising on the retirement of capital assets are made where they can be reasonably estimated. These costs are charged to depreciation expense on a straight-line basis over the expected useful lives of the related assets. Provisions required are revised periodically in accordance with changes in BC Hydro's assumptions and estimates underlying the calculations and with experience arising from the removal of capital assets.

### Deferred Revenue

Deferred revenue consists principally of amounts received under the Skagit River Agreements. Under these agreements, BC Hydro is required to deliver a predetermined amount of electricity each year for an 80-year period ending in fiscal 2066. In return BC Hydro receives approximately U.S. \$22 million each year for a 35-year period ending in fiscal 2020 and U.S. \$100,000 (adjusted for inflation) each year for an 80-year period ending in fiscal 2066.

The amounts received under the Skagit River Agreements are deferred and included in income on an annuity basis over the electricity delivery period ending in fiscal 2066.

### Contributions

Contributions in aid of construction are amounts paid by certain customers toward the cost of capital assets required for the extension of services. These amounts are amortized over the expected useful life of the related assets.

Contributions arising from the Columbia River Treaty relate to three dams built by BC Hydro in the mid-1960s to regulate the flow of the Columbia River. The proceeds received were contributed to BC Hydro to assist in financing the dams' construction. These proceeds were deferred and are amortized to income over the period ending in fiscal 2025, the minimum term of the treaty.

### Employee Benefit Plans

The cost of pensions and other post-retirement benefits earned by employees is actuarially determined using the projected benefit method prorated on service and management's best estimate of expected plan investment performance, salary escalation, retirement ages of employees and expected health care costs. For the purpose of calculating the expected return on plan assets, those assets are valued at fair value.

Past service costs from plan amendments are amortized on a straight-line basis over the average remaining service period of employees active at the date of amendment.

The excess of the net actuarial gain (loss) over 10 per cent of the greater of the benefit obligation and the fair value of plan assets is amortized over the average remaining service period of active employees. The average remaining service period of the active employees covered by the pension plan is 12 years (2001 – 12 years). The average remaining service period of the active employees covered by the other retirement benefits plan is 12 years (2001 – 12 years). When the restructuring of a benefit plan gives rise to both a curtailment and a settlement of obligations, the curtailment is accounted for prior to the settlement.

### Environmental Expenditures and Liabilities

Environmental expenditures are incurred specifically to maintain or enhance the quality of the natural and social environment, or to minimize any adverse impact thereon. Environmental expenditures are expensed as part of operating activities, unless they constitute an asset improvement or act to mitigate or prevent possible future contamination, in which case the expenditures are capitalized and amortized to income. Environmental liabilities are accrued when environmental expenditures relating to activities of BC Hydro are considered likely and the costs can be reasonably estimated.

### Use of Estimates

Management of BC Hydro has made a number of estimates and assumptions relating to the reporting of assets and liabilities and to the disclosure of contingent assets and liabilities to prepare these financial statements in conformity with generally accepted accounting principles. Actual results could differ from these estimates.

**NOTE 1: REGULATION**

BC Hydro is regulated by the Commission, and they are both subject to general or special directions issued by order of the Province. Orders in Council from the Province establish the basis for determining BC Hydro's allowed return on equity, calculation of its revenue requirements, rates charged to customers and the annual Payment to the Province.

**Payment to the Province**

BC Hydro is required to make an annual Payment to the Province on or before June 30 of each year, with respect to the financial results of the most recently completed fiscal year. The payment equals 85 per cent of BC Hydro's distributable surplus provided the debt:equity ratio of BC Hydro after deducting the payment is not greater than 80:20.

Distributable surplus is calculated as consolidated net income adjusted by deducting finance charges capitalized during the year, net of depreciation charged on capitalized finance charges. Equity is calculated as the sum of retained earnings, the Rate Stabilization Account, deferred revenue, contributions arising from the Columbia River Treaty and contributions in aid of construction at the end of the fiscal year. Debt is calculated as the sum of revolving borrowings, bonds, notes and debentures, net of related sinking funds, temporary investments and repurchased debt at the end of the fiscal year.

**Revenue Requirements, Return on Equity and Rates Charged to Customers**

The Commission is required to ensure electricity rates are sufficient to allow BC Hydro to achieve an annual rate of return on equity equal to the return allowed, on a pre-income tax basis, by the most comparable investor-owned energy utility regulated under the

Utilities Commission Act. The allowed annual rate of return on equity calculated for 2002 is 15.24 per cent (2001 – 16.59 per cent). Average electricity rate increases for each year are limited to the projected rate of inflation for British Columbia plus two percentage points. For rate setting purposes, the rate of return on equity projected to be achieved by BC Hydro is determined after taking into account any available transfer from the Rate Stabilization Account.

BC Hydro's basic tariffs for all customers have been frozen until March 31, 2003.

**Rate Stabilization Account**

The current Rate Stabilization Account was established on March 30, 2000, to mitigate the impact of volatile earnings on ratepayers. Transfers are made to the Rate Stabilization Account during high-income years to reduce the need for rate increases in lower-income years.

Where consolidated net income, before any Rate Stabilization Account transfers, is greater than the amount needed by BC Hydro to achieve the annual rate of return on equity allowed by the Commission, then consolidated net income is decreased accordingly by an appropriate transfer to the Rate Stabilization Account.

Where consolidated net income, before any Rate Stabilization Account transfers, is less than the amount needed to achieve the allowed rate of return on equity, then consolidated net income is increased by a transfer from the Rate Stabilization Account. Transfers from the Rate Stabilization Account are subject to a positive balance existing in the account, provided BC Hydro's debt:equity ratio, after the transfers, is not greater than 80:20.

**NOTE 2: ENERGY COSTS**

(in millions)	2002	2001
Water rentals	\$ 228	\$ 255
Electricity purchases	3,638	4,158
Fuel	280	456
Third-party transmission charges	255	287
Compensation and mitigation costs	6	6
	\$ 4,407	\$ 5,162

Electricity purchases include \$356 million (2001 – \$677 million) in energy transactions with the Province related to Canadian Entitlement energy under the Columbia River Treaty. These energy transactions are in the normal course of operations and are recorded based on market prices.

**NOTE 3: DEPRECIATION AND AMORTIZATION**

(in millions)	2002	2001
Depreciation of capital assets in service	\$ 363	\$ 348
Amortization of contributions arising from the Columbia River Treaty and contributions in aid of construction	(42)	(41)
Amortization of studies and abandoned or indefinitely deferred projects	7	8
Amortization of demand-side management programs	28	31
Future removal and site restoration costs	21	20
Capital asset write-offs	9	14
	\$ 386	\$ 380

**NOTE 4: TAXES**

(in millions)	2002	2001
School taxes and grants	\$ 140	\$ 137
Corporation capital taxes and other	26	37
	\$ 166	\$ 174

School taxes and grants and corporation capital taxes are paid to the Province unless otherwise noted. School taxes of \$35 million (2001 – \$34 million) and grants of \$38 million (2001 – \$37 million) were paid to municipalities and regional districts. All school taxes paid to municipalities and regional districts are remitted to the Province. As a Crown corporation, BC Hydro is exempt from Canadian federal and provincial income tax.

**NOTE 5: FINANCE CHARGES**

(in millions)	2002	2001
Interest on debt securities		
– bonds, notes and debentures	\$ 568	\$ 631
– revolving borrowings	3	8
Amortization of deferred debt costs and other expenses	65	51
	<b>636</b>	<b>690</b>
Less:		
Sinking fund income	(58)	(76)
Other income	(18)	(42)
Finance charges capitalized to unfinished construction	(16)	(13)
	<b>(92)</b>	<b>(131)</b>
	<b>\$ 544</b>	<b>\$ 559</b>

Included in interest on debt securities is \$557 million (2001 – \$596 million) in interest paid to the Province.

**NOTE 6: CUSTOMER PROFIT SHARING**

On February 7, 2001, under an Order in Council, the Province directed BC Hydro to pay its residential tariff customers, UtiliCorp Networks Canada (formerly West Kootenay Power) and the Corporation of the City of New Westminster payments equivalent to \$200 per residential customer. These payments totalling \$310 million were deducted from income in fiscal 2001.

**NOTE 7: CAPITAL ASSETS**

(in millions)	2002				2001			
	Capital Assets in Service	Accumulated Depreciation	Unfinished Construction	Composite Depreciation Rate	Capital Assets in Service	Accumulated Depreciation	Unfinished Construction	Composite Depreciation Rate
<b>Generation</b>								
Hydraulic	\$ 5,142	\$1,570	\$ 110	1.5%	\$ 5,105	\$1,495	\$ 69	1.5%
Thermal	399	193	77	3.4	369	181	37	3.3
	<b>5,541</b>	<b>1,763</b>	<b>187</b>		<b>5,474</b>	<b>1,676</b>	<b>106</b>	
<b>Distribution</b>	<b>3,258</b>	<b>1,073</b>	<b>101</b>	<b>2.6</b>	<b>3,142</b>	<b>1,003</b>	<b>77</b>	<b>2.5</b>
<b>Transmission lines</b>	<b>2,740</b>	<b>1,206</b>	<b>28</b>	<b>2.1</b>	<b>2,709</b>	<b>1,154</b>	<b>27</b>	<b>2.1</b>
<b>Substations</b>	<b>1,885</b>	<b>958</b>	<b>59</b>	<b>3.1</b>	<b>1,862</b>	<b>914</b>	<b>49</b>	<b>3.1</b>
<b>Other</b>								
Land and buildings	432	117	13	2.4	431	116	11	2.3
Equipment	607	357	71	9.3	563	315	24	8.6
Service vehicles	117	71	–	9.2	114	67	–	8.2
Sundry	28	12	–	3.3	28	11	–	3.3
	<b>1,184</b>	<b>557</b>	<b>84</b>		<b>1,136</b>	<b>509</b>	<b>35</b>	
<b>Total</b>	<b>\$14,608</b>	<b>\$5,557</b>	<b>\$ 459</b>		<b>\$14,323</b>	<b>\$5,256</b>	<b>\$ 294</b>	

**NOTE 8: SINKING FUNDS**

Sinking funds are held by the Trustee (the Minister of Finance for the Province) for the redemption of long-term debt. Sinking fund income is recorded as a reduction of finance charges.

The sinking fund balances at the balance sheet date include the following investments:

(in millions)	2002		2001	
	Carrying Value	Weighted Average Effective Rate <sup>1</sup>	Carrying Value	Weighted Average Effective Rate <sup>1</sup>
Money market unitized funds <sup>2</sup>	\$ 239	2.1 %	\$ 354	5.0 %
Province of B.C. and B.C. Crown corporation bonds	494	3.1	512	5.7
Federal and other provincial government securities	340	5.8	282	5.6
	<b>\$1,073</b>		<b>\$1,148</b>	

<sup>1</sup> Rate calculated on market yield to maturity.

<sup>2</sup> Investments held in money market unitized funds consist of federal and provincial government paper and high-grade commercial paper with a maturity of one year or less.

Fair value information for sinking funds is presented in Note 11.

**Sinking Fund Requirements**

Substantially all of BC Hydro's debt issues have annual sinking fund cash requirements. The annual sinking fund cash requirements for the next five years are:

(in millions)	2003	2004	2005	2006	2007
Canadian	\$ 45	\$ 41	\$ 36	\$ 34	\$ 29
U.S.	\$6 (C\$9)				

**NOTE 9: DEFERRED DEBT COSTS**

(in millions)	2002	2001
Unrealized foreign exchange losses	\$ 492	\$ 517
Discount and issue costs	95	116
	<b>\$ 587</b>	<b>\$ 633</b>

**NOTE 10: LONG-TERM DEBT AND DEBT MANAGEMENT**

BC Hydro's long-term debt comprises bonds, notes and debentures, substantially all of which have annual sinking fund requirements (see Note 8), and revolving borrowings obtained under an agreement with the Province. BC Hydro's debt is either held or guaranteed by the Province.

Under the Hydro and Power Authority Act, BC Hydro is subject to a borrowing limit of \$8,800 million after deduction of sinking funds. As at March 31, 2002, BC Hydro's total debt under the borrowing limit totalled \$6,906 million (2001 – \$6,900 million).

During fiscal 2002, BC Hydro issued bonds and debentures totalling \$350 million (2001 – \$450 million) with a weighted average effective interest rate of 5.1 per cent (2001 – 6.5 per cent) and a weighted average term to maturity of 18.3 years (2001 – 19.7 years).

Long-term debt, expressed in Canadian dollars, is summarized in the following table by year of maturity.

(in millions)	2002			Weighted Average Interest Rate <sup>1</sup>	2001	
	Canadian	Foreign	Total		Total	Weighted Average Interest Rate <sup>1</sup>
Maturing in fiscal:						
2002	\$ –	\$ –	\$ –	– %	\$ 404	9.3%
2003	–	446	446	7.0	441	7.0
2004	300	–	300	8.0	300	8.0
2005	388	196	584	7.6	514	9.0
2006	313	247	560	5.1	483	6.5
2007	314	287	601	3.9	–	
Total						
1 – 5 years	1,315	1,176	2,491	6.1	2,142	7.9
6 – 10 years	827	558	1,385	6.9	1,927	7.4
11 – 15 years	350	598	948	4.4	1,210	6.6
16 – 20 years	896	–	896	10.6	600	10.7
21 – 25 years	400	797	1,197	7.5	1,485	8.0
26 – 30 years	400	–	400	6.3	–	–
Over 30 years	–	478	478	7.4	673	7.1
Bonds, notes and debentures	4,188	3,607	7,795	6.8	8,037	7.8
Revolving borrowings	168	16	184	2.0	11	5.0
	<u>\$ 4,356</u>	<u>\$ 3,623</u>	<u>7,979</u>		<u>8,048</u>	
Less: Current portion			630		415	
Long-term debt			<u>\$ 7,349</u>		<u>\$ 7,633</u>	

<sup>1</sup> The weighted average interest rate represents the effective rate of interest on fixed-rate bonds and notes and the current interest rate in effect at March 31 for floating-rate bonds and notes, all before considering the effect of derivative financial instruments used to manage interest rate risk.

Under an agreement with the Province, BC Hydro indemnifies the Province for any credit losses incurred from contracts entered into by the Province on BC Hydro's behalf. BC Hydro has not experienced any losses due to the indemnity.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS** FOR THE YEARS ENDED MARCH 31, 2002 AND 2001

The following interest rate contracts were in place at March 31, 2002 and 2001, with a carrying value of nil at both dates. Average variable rates are based on the effective rates at the balance sheet date and vary over time.

(dollar amounts in millions)	2002	2001
<b>Receive fixed, pay floating rate swaps</b>		
Notional amount <sup>1</sup>	\$ 1,267	\$ 915
Weighted average receive rate	5.59%	5.95%
Weighted average pay rate	2.13%	5.06%
Remaining terms	4 years	1 year
<b>Receive floating, pay fixed rate swaps</b>		
Notional amount <sup>1</sup>	\$ 1,210	\$ 331
Weighted average receive rate	2.04%	6.51%
Weighted average pay rate	3.70%	6.28%
Remaining terms	1 year	4 years

<sup>1</sup>Notional amount for a derivative instrument is defined as the contractual amount on which payments are calculated.

The following foreign currency contracts with a net carrying value of \$16 million (2001 – \$19 million) were in place at March 31, 2002 and 2001. Such contracts are used to hedge foreign dollar principal and interest payments.

(dollar amounts in millions)	2002	2001
<b>Cross Currency Swaps<sup>1</sup></b>		
BC Hydro receives foreign currency:		
United States dollar – notional amount <sup>2</sup>	U.S. \$243	U.S. \$195
United States dollar – weighted average exchange rate	1.42	1.39
Remaining term	4 years	5 years
Japanese yen – notional amount <sup>2</sup>	¥ 10,000	¥ 10,000
Japanese yen – weighted average exchange rate	0.0135	0.0135
Remaining term	2 years	3 years

<sup>1</sup> Under these arrangements, BC Hydro receives or pays the foreign currency in exchange for Canadian currency.

<sup>2</sup> Notional amount for a derivative instrument is defined as the contractual amount on which payments are calculated.

Total long-term debt, sinking funds and foreign currency contracts are stated in the following table showing the Canadian dollar equivalent of the currency in which they are payable.

(in millions)	2002					2001	
	In Currency Units	At the closing exchange rates at the balance sheet date (C\$)	Foreign Currency Contracts	Sinking Funds	Net Principal Outstanding Before Hedging	Net Principal Outstanding After Hedging	Net Principal Outstanding After Hedging
Canadian	\$ 4,356	\$ 4,356	\$ –	\$ (401)	\$ 3,955	\$ 4,561	\$ 4,287
U.S.	\$ 2,151	3,427	(30)	(661)	2,736	2,329	2,594
Structured Yen	¥10,000	120	15	(11)	124	–	–
Structured U.S.	\$ 48	76	(1)	–	75	–	–
Long-term debt		\$ 7,979	\$ (16)	\$ (1,073)	\$ 6,890	\$ 6,890	\$ 6,881

### Foreign Debt Management

As at March 31, 2002, BC Hydro hedged U.S. dollar debt, including sinking funds and cross currency swaps totalling U.S. \$710 million with a Canadian dollar equivalent of \$1,101 million (2001 – U.S. \$581 million with a Canadian dollar equivalent of \$888 million). This results in a net foreign currency exposure of U.S. \$1,440 million (2001 – U.S. \$1,641 million) with a Canadian dollar equivalent of \$2,295 million (2001 – \$2,589 million).

### Revolving Borrowings

Revolving borrowings outstanding at March 31, 2002 have a weighted average remaining term to maturity of 70 days (2001 – 85 days). The authorized commercial paper borrowing program, which includes revolving borrowings, is limited to \$1,400 million under the Fiscal Agency Agreement. Interest is charged based on prevailing money market rates.

### Redeemable by the Bond Holder

Certain debt held by the Canada Pension Plan Investment Fund and by the Minister of Finance 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, 2002 this debt totalled \$233 million (2001 – \$242 million), net of related sinking funds, with maturity dates ranging from fiscal 2005 to fiscal 2010 (2001 – fiscal 2005 to fiscal 2010).

### Redeemable by BC Hydro

BC Hydro debt of \$97 million (2001 – \$102 million), net of related sinking funds, with a coupon rate of 13.5 per cent (2001 – 13.5 per cent), is callable at BC Hydro's option on January 15, 2004 (2001 – January 15, 2004).

**NOTE 11: FINANCIAL INSTRUMENTS**

**Fair Value**

At March 31, 2002 and 2001, BC Hydro's financial instruments included temporary investments, accounts receivable and accrued revenue, sinking funds, accounts payable and accrued liabilities, accrued interest, accrued Payment to the Province, long-term debt, and interest rate and foreign exchange derivative financial instruments. Derivative financial instruments are held with the Province, which enters into such agreements with third parties on BC Hydro's behalf.

The fair value of BC Hydro's financial instruments approximates carrying amounts where applicable, except as shown in the following table:

(in millions)	2002		2001	
	Carrying Value <sup>1</sup>	Fair Value <sup>2</sup>	Carrying Value <sup>1</sup>	Fair Value <sup>2</sup>
Bonds, notes and debentures	\$ (7,795)	\$ (8,527)	\$ (8,037)	\$ (8,964)
Revolving borrowings <sup>3</sup>	(184)	(184)	(11)	(11)
Long-term debt before current portion	\$ (7,979)	\$ (8,711)	\$ (8,048)	\$ (8,975)
Sinking funds	\$ 1,073	\$ 1,094	\$ 1,148	\$ 1,170
Derivative financial instruments				
Net foreign currency contracts	\$ 16	\$ 43	\$ 19	\$ 47
Interest rate swaps	–	(2)	–	(4)

<sup>1</sup> Carrying value represents the amount which is recorded in BC Hydro's financial statements. Bracketed amounts represent liabilities.

<sup>2</sup> Market rates and prices used in determining fair value are as of the closing balance sheet date.

<sup>3</sup> Due to the short-term nature of revolving borrowings, fair value approximates carrying value.

**Credit Risk Management**

BC Hydro is directly exposed to counterparty credit risk as a result of the purchase and sale of electricity and natural gas by its subsidiary, Powerex. Powerex's principal markets for power marketing services are power exchanges, power pools, utilities and their affiliates in the western United States and western Canada. Powerex has concentrations of credit exposure to these parties throughout these regions. These concentrations of risk exposure may affect BC Hydro's overall credit risk in that certain Powerex customers may be similarly affected by changes in economic, regulatory, political and other factors. BC Hydro and Powerex manage credit risk by authorizing transactions with only credit-worthy counterparties as determined by BC Hydro Board-approved policies, and by monitoring the credit risk and credit standing of counterparties on a regular basis.

The rapid rise of wholesale power prices and in-state supply shortages caused significant financial hardship for a number of utilities in California during fiscal 2001. These utilities have defaulted on payments to the California Power Exchange (Cal Px) and the California Independent System Operator (Cal ISO). As a result of the payment defaults by these utilities, the Cal Px and Cal ISO have been unable to pay amounts owing to Powerex.

At March 31, 2002, the amount owing from Cal Px and Cal ISO was U.S. \$285 million (Cdn \$454 million). A portion of this amount was not recognized as revenue due to market uncertainty. BC Hydro has recorded provisions for uncollectible amounts, which in management's best estimate are sufficient to provide for any remaining exposure.

In addition, the State of California has requested the Federal Regulatory Commission (FERC) to consider whether refunds should be made to Cal Px, Cal ISO and the California Department of Water Resources by various suppliers, including Powerex (see Note 13).

Due to the instability in the California market and ongoing developments in regulatory and legal proceedings, management cannot predict the outcome, and the amount ultimately collected may differ materially from management's current estimate. As a result of defaults by the California utilities and certain related government action, management has not disclosed the provision amount or range of expected outcomes due to the potentially adverse effect on the collection process.

## NOTE 12: EMPLOYEE BENEFIT PLANS

### Employee Benefits

BC Hydro provides a defined benefit pension plan to virtually all employees. Pension benefits are based on years of membership service and highest five-year average pensionable earnings. Employees make basic and indexing contributions to the plan funds based on a percentage of current pensionable earnings. Annual cost-of-living increases are provided to pensioners to the extent that funds are available in the indexing fund. BC Hydro contributes amounts as prescribed by an independent actuary.

BC Hydro provides post-retirement benefits other than pensions including medical, extended health and life insurance coverage for retirees that have at least 10 years of service and qualify to receive pension benefits. BC Hydro also provides post-employment benefits other than pensions including the short-term continuation of health care and life insurance to terminated employees or to survivors on the death of an employee. Post-employment benefits also include the pay out of benefits that vest or accumulate, such as banked vacation.

Information about the defined benefit plans, post-retirement benefits and post-employment benefits other than pensions are as follows:

a) The net expense for BC Hydro's defined benefit plans is as follows:

(in millions)	Pension Benefit Plans		Other Benefit Plans	
	2002	2001	2002	2001
Defined benefit plans	\$ 7	\$ 6	\$ 21	\$ 20

b) Information about BC Hydro's defined benefit plans as at March 31, in aggregate, is as follows:

(in millions)	Pension Benefit Plans		Other Benefit Plans	
	2002	2001	2002	2001
Accrued benefit obligation	\$ 1,875	\$ 1,775	\$ 133	\$ 128
Fair value of plan assets	1,906	1,986	–	–
Funded Status-Plan surplus (deficit)	\$ 31	\$ 211	\$ (133)	\$ (128)
Accrued benefit asset (liability)	\$ 79	\$ 61	\$ (31)	\$ (16)

No valuation allowance was required in 2002.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS** FOR THE YEARS ENDED MARCH 31, 2002 AND 2001

c) Included in the above accrued benefit obligation and fair value of plan assets at year-end are the following amounts in respect of plans that are not fully funded:

(in millions)	Pension Benefit Plans		Other Benefit Plans	
	2002	2001	2002	2001
Accrued benefit obligation	\$ 59	\$ 55	\$ 133	\$ 128
Fair value of plan assets	–	–	–	–
Funded Status-Plan deficit	\$ (59)	\$ (55)	\$ (133)	\$ (128)

d) The significant assumptions adopted in measuring the company's accrued benefit obligations are as follows:

	Pension Benefit Plans		Other Benefit Plans	
	2002	2001	2002	2001
Discount rate	7%	7%	7%	7%
Expected long-term rate of return on plan assets	7%	7%	–	–
Rate of compensation increase	projected inflation + 1.5%	projected inflation + 1.5%		

For measurement purposes, a 6 per cent health care cost trend rate was assumed for 2002.

e) Other information about BC Hydro's defined benefit plans are as follows:

(in millions)	Pension Benefit Plans		Other Benefit Plans	
	2002	2001	2002	2001
Employer contributions	\$ 24	\$ 20	\$ –	\$ –
Employees' contributions	\$ 13	\$ 9	\$ –	\$ –
Benefits paid	\$ 89	\$ 85	\$ 6	\$ 5

No amendments or curtailments occurred in the pension plans during the year.

**NOTE 13: COMMITMENTS AND CONTINGENCIES**

**Energy Purchase Commitments**

BC Hydro has entered into long-term contracts to purchase energy to meet a portion of its expected annual electricity requirements. The minimum obligations to purchase energy under these contracts have a total net present value of approximately \$7,563 million of which approximately \$1,329 million relates to transportation contracts and the purchase of natural gas at market prices over 30 years. The remaining commitments are at predetermined prices.

Payments for the next five years are approximately (in millions): 2003 – \$1,010; 2004 – \$688; 2005 – \$607; 2006 – \$631; 2007 – \$634.

**Legal Contingencies**

- a) Powerex, a wholly owned subsidiary of BC Hydro, has been named, along with other energy providers, as a defendant in a number of lawsuits which allege that the California wholesale markets were unlawfully manipulated and that the energy prices were not just and reasonable. Estimates of claims against all of the market participants arising from alleged market manipulations range from hundreds of millions of U.S. dollars to several billion U.S. dollars. Several investigations and regulatory proceedings at the state and federal levels are also looking into the causes of the high wholesale electricity prices in the western United States. Due to the ongoing developments in regulatory and legal proceedings relating to the problems experienced in the California wholesale power market, management cannot predict the outcome of the various claims against Powerex. Powerex believes the terms of its sales were just and reasonable and do not reflect any alleged market manipulation or other unlawful market conduct. Powerex is vigorously defending itself against these claims and prosecuting its claims for unpaid accounts for power sales (see Note 11).
- b) On December 2, 2001, Enron Corp. (Enron) and certain of its subsidiaries filed for bankruptcy protection. As a result, the long-term Power Purchase Agreement between Powerex and Enron terminated. Under a 1997 agreement between Alcan, Enron Power Marketing Inc. (EPMI), Powerex and BC Hydro, Alcan agreed to remain liable to Powerex for the payment obligations of EPMI for which Alcan was originally responsible. Powerex has initiated a claim against Alcan amounting to approximately U.S. \$100 million in respect of the value associated with the future energy deliveries to Powerex required under the contract. At this time, the outcome of the claim is not determinable.
- c) Due to the size, complexity and nature of BC Hydro's operations, various other legal matters are pending. It is not possible at this time to predict with any certainty the outcome of such litigation. Management believes that any settlements related to these matters will not have a material effect on BC Hydro's consolidated financial position or results of operations.

**NOTE 14: REVENUES BY GEOGRAPHIC LOCATION**

(in millions)	2002	2001
British Columbia	\$ 2,450	\$ 2,431
Rest of Canada	192	173
United States	3,669	5,285
	<b>\$ 6,311</b>	<b>\$ 7,889</b>

## PERFORMANCE MEASURES

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### GOALS, OBJECTIVES, AND KEY STRATEGIES

In fiscal 2002 the concept of sustainability was adopted as BC Hydro's strategic direction. While already on the road to sustainability, BC Hydro recognized that much more value could be created by further integrating sustainability considerations into its core business strategies. The following were BC Hydro's goals and objectives for fiscal 2002 as articulated in the Performance Plan and reflected in all business planning.

### SUSTAINABILITY

BC Hydro's vision is based on the principles of providing financial, environmental and social value to its stakeholders. This means BC Hydro is in business to make money in a manner that promotes positive, and minimizes negative, environmental impacts and provides benefits to the public and employees.

BC Hydro describes sustainability and the interplay of financial, environmental and social performance in its Triple Bottom Line report.

### SUPERIOR VALUE FOR CUSTOMERS

BC Hydro will provide its customers with reliable services and integrated, sustainable energy solutions that exceed expectations. BC Hydro must be competitive, efficient, caring, helpful and worthy of trust.

### SUPERIOR SHAREHOLDER VALUE

BC Hydro will provide financial, environmental and social returns to its shareholder consistent with expectations of a best-in-class commercial energy company, while reflecting the cost of additional activities it undertakes as part of its public policy role.

### EXCEPTIONAL CONTRIBUTION OF PEOPLE

BC Hydro will build a high-performance workforce, committed to helping it succeed in tomorrow's energy marketplace, by communicating its vision, investing in its people, and cultivating a work environment that maximizes employee potential.

### BUILDING AND MAINTAINING PUBLIC SUPPORT

BC Hydro will build public expectations into its business decisions and, in so doing, contribute to the economic, environmental and social well-being of communities.

### GROWTH

BC Hydro will grow its business and improve its performance across the triple bottom line by returning more value from its existing assets and creating new value through integrated energy solutions and sustainable energy business investments.

To meet these goals and objectives, BC Hydro adopted a number of key strategies. These strategies were as follows.

- Increase shareholder value by focusing on increasing financial, environmental and social returns.
- Secure the base through operational efficiency and productivity and ensuring public consent to operate. BC Hydro will improve upon the status quo to ensure resources are available to invest in the future.
- Enhance customer focus through strengthening of capabilities that will be required regardless of competition.
- Grow the business through ensuring BC Hydro is prepared to enhance the value of its assets.
- Build a strong and capable organization through the development of human and technology resources required to execute all the other strategies.

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## PERFORMANCE MEASURES, TARGETS, AND RESULTS

Performance measurement is an integral part of BC Hydro's Strategic Management Process. The tool that BC Hydro uses to assess performance is the Balanced Scorecard. The Scorecard is used to translate BC Hydro's goals, objectives, and strategies into tangible measures and targets that drive action. The balanced part of the Scorecard means it contains a combination of both financial and non-financial indicators as well as measures of past performance (lag indicators), and measures of the drivers of future performance (lead indicators).

The development of performance measures is an evolving process. As business needs change, so also must the related measures change. Performance measures have been identified for the majority of BC Hydro's strategic objectives. The following report provides the results for BC Hydro fiscal 2002 performance measures against current targets and, where available, historical and benchmark performance.

### Shareholder Value-Added (SVA) (in millions)

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	Actual	Target
01/02	\$ (145)	\$ (306)
00/01	103	\$ (55)
99/00	129	\$ 30

SVA is a measure of how well BC Hydro performed beyond the return expected for a company with a similar level of risk. It is calculated as: Net Operating Profit less Capital Charge. Net operating profit is net income before finance charges and the transfer to/from the Rate Stabilization Account. Capital Charge is Invested Capital x Cost of Capital.

Lower energy costs and lower finance charges were the primary reasons for the favourable SVA variance from target. The lower electricity trade revenues and lower total energy costs were due mainly to lower electricity market prices.

Average market prices were significantly higher for the months of April and May, but have declined substantially since late June, largely as a result of lower cooling demand in California, rising Northwest hydro production, conservation and lower demand due to a slowing economy. This same decline in market prices, as well as the impact of lower water inflows this year, accounts for the negative SVA variance from the prior year.

### COMA per Customer (Capital, Operations, Maintenance and Administration Expenses per Customer)

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	Actual	Target
01/02	\$ 323.5	\$ 341.1

COMA per Customer measures the efficiency of capital and OMA expenditures in serving customers. It is calculated as: [Recurring capital expenditures + OMA] / Total number of customers. COMA excludes spending on initiatives, growth, approved ex-plan items and specific capital. Due to the one-time nature of initiatives, including them does not measure efficiency over time.

COMA/Customer was lower than Target primarily due to lower distribution capital spending and the realization of committed OMA reductions.

The measure definition changed from the prior year. Previously, Customers was defined as the "number of retail customers weighted by average revenues." Statistical analysis was performed on the drivers of COMA expenditures and it was determined that changes in COMA was more correlated with the total unweighted number of customers. Therefore the denominator definition was changed.

## Customer Satisfaction

Customer	Actual	Target
Residential	89%	68%
Middle Market	84%	68%
Large Business	91%	68%

Customer Satisfaction measures customer's perceived satisfaction with BC Hydro products and services. The measure is based on the customer's response to the survey question "How satisfied are you with BC Hydro" – very satisfied, satisfied, somewhat dissatisfied, or dissatisfied. The results reflect the percentage of customers, by segment, who responded they were

either satisfied or very satisfied and are based on the customer's overall perception and not necessarily on a service experience.

The methodology used to measure Customer Satisfaction was refined for fiscal 2002. Previously BC Hydro measured customer satisfaction on a 10 point scale. Since BC Hydro had no prior results based on the new methodology, the targets were based on the most recent results measured under the old methodology and as a result were set conservatively.

The Canadian Electrical Association's composite average for customer satisfaction was 80 per cent in 2000 (the latest year for which data is available).

## Customer Transaction Follow-up Survey

	Actual	Target
01/02	64%	68%

The Customer Transaction Follow-up Survey is used to monitor BC Hydro's performance in satisfying customers based on their actual service experiences. For a sample of customers who have had contact with a BC Hydro service provider, a survey is conducted to determine customer satisfaction with the service experience. This measure tracks the percentage of respondents who are very satisfied with call centre service transactions.

The negative variance against Target was due primarily to a drop in the rating of "ease of contact" and "use of automated voice menu" areas. A number of actions have been initiated in response to the declining customer satisfaction rating. These initiatives include changes to the automated voice menu based on customer focus group session feedback and technology improvements to improve call handling ability and to reduce customer wait times.

Customer Transaction Follow-up Survey is a new measure, and accordingly no historical comparison exists.

## Public Opinion

	Actual	Target
01/02	66%	55%
00/01	59%	60%
99/00	63%	60%

The purpose of the Public Opinion measure is to track the public's overall impressions of BC Hydro in order to determine to what extent we have the public consent to operate. The measure tracks the results of the survey question "Would you say that your general attitude

towards BC Hydro is very favourable, somewhat favourable, somewhat unfavourable, very unfavourable or are you indifferent towards them?"

Actual results were higher than Target and previous year largely due to last year's increase in the natural gas rates and the misperception of BC Hydro's role and relationship to BC Gas. With time and communication, this misperception was reduced and public opinion is now back to historical levels.

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### Average System Availability Index (ASAI)

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	Actual	Target
<b>01/02</b>	<b>99.959%</b>	99.973%
00/01	99.972%	99.972%
99/00	99.974%	99.970%

ASAI is the percentage of total time that power was available to customers calculated on a rolling twelve-month-average basis. This measure is a standard indicator of reliability of service for the electrical utility industry.

ASAI was heavily impacted by the December 14–16, 2001 windstorm that hit the Lower Mainland and

Vancouver Island regions. The three-day storm accounted for 36 per cent of total customer-hours lost during the 12-month period. Other major events included the May 28, 2001 windstorm that affected almost the entire province and the October 22–23, 2001 windstorm in the Lower Mainland and Vancouver Island regions. Excluding the impacts of the December storm, ASAI would have been on target at 99.974 per cent.

Even with these adverse weather events, BC Hydro still achieved results on par with the Canadian Electricity Association's composite results (99.963 per cent) for calendar 2000 (the latest available results).

### Customer Average Interruption Duration Index (CAIDI)

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	Actual	Target
<b>01/02</b>	<b>2.57</b>	2.15
00/01	2.12	1.83
99/00	1.87	2.00

Whereas ASAI measures system availability, CAIDI measures the average number of hours per interruption. It is also calculated on a rolling twelve-month-average basis and is an industry standard.

CAIDI was also heavily impacted by the December 14–16, 2001 windstorm that hit the Lower Mainland and Vancouver Island regions, by the May 28, 2001

windstorm that affected almost the entire province, and by the October 22–23, 2001 windstorm in the Lower Mainland and Vancouver Island regions. Excluding the impacts of the December storm, CAIDI would have been better than target at 1.97 hours.

The Canadian Electricity Association's composite results were 1.43 hours for 2000 (the latest available results). BC Hydro consistently has a higher CAIDI than the composite due mainly to BC Hydro's vast and sparsely populated service area. The composite includes municipal utilities with small, densely populated service areas.

## Percentage Improvement in All Injury Frequency

	Actual	Target
01/02	13%	5%

All Injury Frequency is composed of Medical Aid Injuries and Disabling Injuries. Medical Aid Injuries are defined as injuries where a medical practitioner has submitted a fee to Workers' Compensation Board (WCB) for services rendered and the duration the employee was absent from work did not exceed the normal shift of the day of injury. Disabling Injuries are defined as injuries that involve the employee being absent for more than the day of injury.

Increased company-wide attention being paid to integrating safety into the workplace is the main cause of the positive variance over Target. BC Hydro has historically measured All Injury Frequency but as a result of a refinement in the calculation of worked hours in the pay records, historical comparisons are no longer meaningful.

The Canadian Electrical Association's composite average for All Injury Frequency was 4.09 in 2000 (the latest year for which data is available). With the 13 per cent reduction, BC Hydro's result was 5.28. BC Hydro is targeting a further 10 per cent reduction in each of the next two years.

## Effectiveness of External Safety Program Communications

	Actual	Target
01/02	45%	25%
99/00	33%	unavailable

Effectiveness of External Safety Program Communications measures the degree to which external safety communications are heard and understood by the public. It is a survey of the unaided recall of the 7 Steps to Electrical Safety message by the target audience (men, aged 18–35 working in high-risk occupations).

The fiscal 2002 result represents a 12-point increase in public awareness and attitudes towards BC Hydro's safety initiatives. The primary drivers of this result were an increase from four weeks to nine weeks in the amount of radio time purchased and a change in the radio exposure strategy. The radio time was concentrated into flights over a 13-week period during the summer months in 2001 versus flights in August to September of 2000 and again in February and March of 2001. Essentially the concentration of the messaging coincided with the peak of heavy construction (and radio listening period) – June/July/August in 2001.

## Gigawatt Hours from New Green Energy Sources

	Actual	Target
01/02	498 GW·h	350 GW·h

The purpose of the Gigawatt Hours from New Green Energy Sources measure is to demonstrate BC Hydro's commitment to progressive environmental management by providing environmentally sound energy sources to meet public energy demand. The measure

is defined as gigawatt hours (GW·h) of new green energy contracted through Electricity Purchase Agreements (EPAs).

A total of 19 EPAs in the less than 40 GW·h/year category have been executed in fiscal 2002. Three over-40 GW·h proponents have also been offered EPAs through the over-40 GW·h call for energy. These EPAs are still to be executed and are anticipated to provide an additional 441 GW·h.

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## Greenhouse Gas Offsets

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	Actual	Target
01/02	0 Mt	1.5 Mt

The purpose of the Greenhouse Gas Offsets measure is to demonstrate BC Hydro's commitment to progressive environmental management by reducing BC Hydro's net impact on climate change. The measure is defined as metric tonnes of CO<sub>2</sub> equivalent offsets purchased relative to plan based on signed contracts.

The fiscal 2002 target was not achieved because the supply of quality Greenhouse Gas (GHG) offset projects was less than expected and GHG offset sellers were slow to negotiate in light of regulatory and legal uncertainty. The fiscal 2003 target of contracting three million tonnes of offsets is believed to be on track as BC Hydro is in the process of closing two of the three major GHG offset opportunities. The overall GHG offset target of contracting 5.5 million tonnes of offsets by fiscal 2005 does not appear to be in jeopardy.

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## Percentage Completion of the Community Fund Agreement Strategy

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	Actual	Target
01/02	74%	40%

The purpose of the Percentage Completion of the Community Fund Agreement Strategy measure is to indicate the reduction of risk (operational and energy

available for import/export) from assets on First Nations' land. It is defined as the percentage of First Nations bands with signed community fund agreements in place.

Actual greatly exceeded Target as the program has been embraced by First Nations faster than anticipated.

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## Percentage of Top Customers Visited by VPs

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	Actual	Target
01/02	49%	20%

The purpose of the Percentage of Top Customers Visited by VPs measure is to continue BC Hydro's process of creating a customer-focused culture by demonstrating top management's commitment to customers. The measure is defined as the percentage

of the top 120 customers that have had a visit by Senior Management.

The measure's positive variance relative to plan was due to several communications opportunities that presented themselves in fiscal 2002. These opportunities included the re-launch of Power Smart, and the Transmission and Generation conferences.

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## Percentage Completion of Milestones for Sustainability Opportunities

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	Actual	Target
01/02	87%	80%

BC Hydro has identified key sustainability opportunities in its Sustainability Action Plan (SAP). The completion of this plan is important to BC Hydro's objective of

becoming the leading sustainable energy company in North America. The measure is defined as the percentage of milestones completed for all SAP initiatives.

Some initiatives in the SAP are on hold while the B.C. Government completes its Energy Policy Review. These initiatives have been factored out of the results.

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### Percentage of Management and Professional Employees with Personal Development Plans

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	Actual	Target
01/02	96%	80%

The purpose of the Percentage of Management and Professional (M&P) Employees with Personal Development Plans (PDPs) measure is to track the involvement of all M&P employees in the management development activity.

The results were above Target due to the following factors:

1. Establishing PDPs as one of the Incentive Contract measures has provided positive motivation among M&P employees to complete PDPs.
2. The roll-out of the new policy guidelines and process/template for training and development in the spring of 2001 has reinforced the importance of the development planning process to employees and managers alike.
3. The HR Business Partners have invested considerable effort in communicating the tools and expectations around development planning to their management groups.

### Percentage of Bargaining Unit Employees with Personal Development Plans

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	Actual	Target
01/02	94%	75%

The purpose of the Percentage of Bargaining Unit Employees with Personal Development Plans (PDPs) measure is to track the progress of unionized employees towards creating personal training and development plans.

The results were above Target due to the following factors:

1. Establishing PDPs as one of the three gainsharing measures has provided positive incentive among bargaining unit members to complete PDPs.
2. The roll-out of the new policy guidelines and process/template for training and development in the spring of 2001 has reinforced the importance of the development planning process to employees and managers alike.
3. The HR Business Partners have invested considerable effort in communicating the tools and expectations around development planning to their management groups.

### Effective Communications Competency

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	Actual	Target
01/02	66%	40%

The purpose of the Effective Communications Competency measure is to determine improvements in the leadership competency of effective communication. The measure is defined as the percentage of Leader-Managers at or above standard for Effective

Communication as measured by the 360-degree feedback tool.

Instead of the 360-degree feedback tool, pulse check questionnaires were completed in September 2001 and February 2002 to determine the level of competency improvement. The focus on the need for improvement throughout fiscal 2002 led to many managers participating in development interventions directly related to strengthening this competency.

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## Organization and Business Awareness Competency

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	Actual	Target
01/02	77%	47%

The purpose of the Organizational and Business Awareness Competency measure is to determine improvements in the leadership competency of organizational and business awareness. The measure is defined as the percentage of Leader-Managers at or above standard for Organizational and Business

Awareness as measured by the 360-degree feedback tool.

Instead of the 360-degree feedback tool, pulse check questionnaires were completed in September 2001 and February 2002 to determine the level of competency improvement. The focus on the need for improvement throughout fiscal 2002 led to many managers participating in development interventions directly related to strengthening this competency.

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## Percentage Milestones Met in Top Strategic Information Technology Projects

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	Actual	Target
01/02	66%	60%

The Percentage Milestones Met in Top Strategic Information Technology Projects is defined as the percentage of milestones met relative to plan. The criteria for meeting milestones included being on-time and on-budget.

Some key projects including Finance Business Transformation, Work Management/Supply Chain Replacement, and the Customer Information System have had their deadlines extended due to Line of Business restructuring and the potential impacts of the Government's Core Review and Energy Policy Review. Despite these delays, key work on other initiatives resulted in greater than Target performance.

## SUPPLY AND DEMAND

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### COST OF ENERGY SOURCES

BC Hydro's Long Run Marginal Cost of Energy is 4.9 cents/kilowatt-hour (kW·h). Below are the costs of the various electricity supply options that we will be using to meet our needs in the future:

2002 Resource Stack	Energy Cost (cents/kW·h)
Resource Smart	1.5 to 5.0
Power Smart	1.8 to 2.2
Green Independent Power Producers	4.7 to 5.2
Alternate Energy Sources	
•Wind	6 to 12
•Wave	7+
•Micro Hydro	5.5 to 9
Customer Generation	maximum of 4.9

## ELECTRICITY LOAD

### BC Hydro System – Fiscal Year-To-Date Review

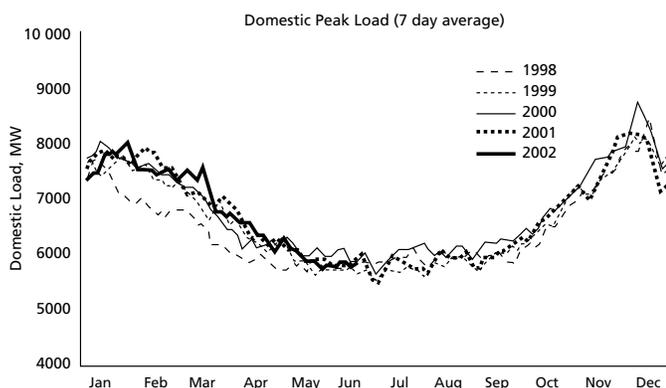
#### Energy Sales

Total billed sales fell by over 400 GW·h in fiscal 2002 compared to the previous fiscal year due to soft demand for B.C.'s commodity exports and a slow population growth in B.C.

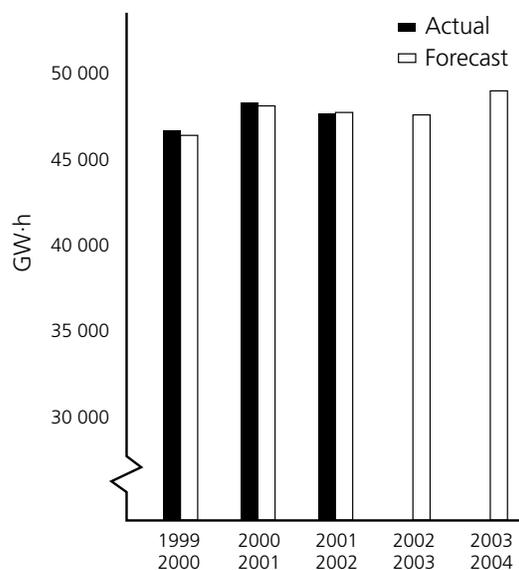
The key economic assumption behind the fiscal 2002 electricity sales forecast was that the global economic slowdown that began in 2000 would linger on. Total domestic electricity sales were not forecast to grow in fiscal 2002. As a result, the variance in total billed sales to domestic customers served by BC Hydro remained small at -0.7 per cent for the fiscal year.

External factors further hindered the B.C. economy in 2001. Impact of the terrorist attack in the U.S. and the softwood lumber dispute was significant because of B.C.'s heavy reliance on tourism and the U.S. lumber market.

Higher residential demand for space and water heating load, due to overall cooler-than-normal temperatures, offset the reductions in industrial and commercial electricity sales to a certain extent. In the 12-month period between April 2001 and March 2002, actual degree days were 3269 compared to the 10-year normal of 3102.



### BCH System – Billed Sales



#### Peak Demand

BC Hydro's integrated system sales to domestic customers reached a one-hour peak of 8692 MW on December 4, 2001, at a daily average temperature of +2.2°C. The all-time record for the system is 8995 MW which occurred in the previous winter.

In addition to the impact of mild winter temperatures, the fiscal 2002 winter peak demand was also influenced by production curtailments by major industrial customers because of weak global commodity prices.

#### BCH System – Short-Term Forecast

Embedded in the load forecast is the assumption that some recovery in the global economy will occur over the course of fiscal 2003, with more improvement projected for fiscal 2004. Increase in demand for B.C.'s resource-based exports will continue to depend to a large extent on the performance of the U.S. economy and a resumption of growth in Japan.

## Vancouver Island (VI) – Fiscal Year Review

### Energy Sales

Dominant industries on VI are all related to the forestry sector. Compared to the previous fiscal year, billed sales to forestry and related industries on VI fell by over 500 GW·h as a result of production curtailments in response to weak global commodity prices. Tourism is a large industry on VI. Consequently, commercial sales were also lower compared to the previous fiscal year because of reductions in demand by VI's service-producing industries.

Higher residential demand for space and water heating load, due to overall cooler-than-normal temperatures, offset some of the reductions in industrial and commercial electricity sales. In the 12-month period between April 2001 and March 2002, actual degree days were 2992 compared to the 10-year norm of 2854. The variance in total billed sales to all VI customers was -2.4 per cent.

### Peak Demand

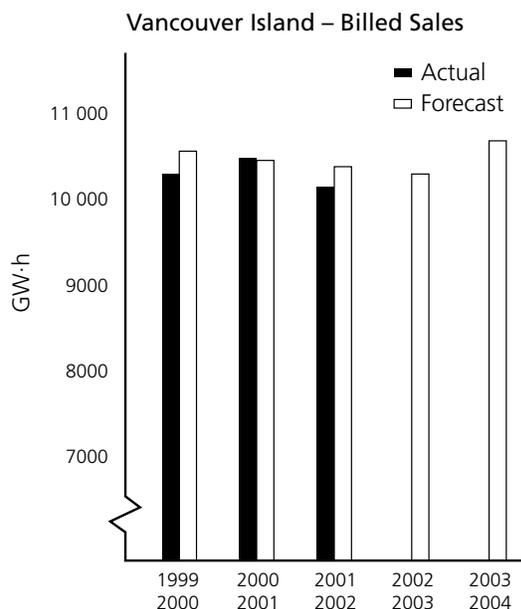
The actual peak for Vancouver Island was 1955 MW which occurred on December 17, 2001 at an actual temperature of +3.8°C. The all-time record for VI is 2065 MW which occurred in the previous winter.

Extensive curtailment shutdown by major industrial customers on VI was a key factor influencing the VI fiscal 2002 winter peak demand. Therefore, the peak should be weather-normalized, as well as adjusted for other factors influencing the peak, to reflect the real growth of electricity demand on VI.

### Vancouver Island (VI) – Short-Term Forecast

Vancouver Island's population and economy are growing, increasing the demand for electricity. Electricity demand is projected to grow by about 30 MW or 1.4 per cent over the next five years. Much of the growth will be driven by an estimated population growth of about 1.2 per cent per year.

Only 20 per cent of Vancouver Island electricity needs are met on Vancouver Island. On-Island generation is



more cost effective and environmentally responsible than generating on the mainland or buying new electricity on the open market and moving it to the Island. The remaining 80 per cent of the Island's electricity is generated elsewhere in the province and supplied to Vancouver Island by three sets of submarine cables. One existing system (between Tsawwassen and Duncan) is aging and will be decommissioned between now and 2007. Even after the cables are decommissioned, Vancouver Island will still continue to get the majority of its power from the mainland.

But replacing the deteriorating cable system does not address the demand for more electricity. Replacing the cable system only provides the Island with a new cable – not more electricity, which is needed.

The VIGP planned for Duke Point and the independently owned facility at Campbell River will offset only some of the loss from the decommissioned cables. To complete the replacement of that loss of supply in 2007, a third plant for Vancouver Island is planned for that same year. However, through an aggressive Power Smart conservation program (\$600 million over 10 years) and increased use of green and alternative energies, BC Hydro hopes that the third plant can be deferred for five to 10 years – perhaps longer.

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## ELECTRICITY AND GAS PRICES

BC Hydro tracks market information that forms the basis for its future price forecasts for both natural gas and electricity.

### Forward Market Information

In the short term, BC Hydro tracks “forward prices,” which are market price quotes on transactions for delivery at a specified time and delivery point. For electricity, the nearest (liquid) delivery point is Mid-Columbia, and in the case of natural gas it is Sumas. Market forward quotes are readily available for a period of up to two years for electricity and for three to five years for gas. Forward prices for both electricity and natural gas can be volatile, but they provide an important near-term reference point since they reflect all the information currently available to market participants.

### Longer-Term Market Fundamentals

The longer-term forecast – available from a number of specialized forecasting groups – is based on representing the supply and demand for electricity and of cost drivers expected to prevail. Key factors in the long-term forecasts are:

- the expected stock and availability of generating units (especially new units);
- the expected level of fuel prices and other costs of operating generating units;
- the level of demand as driven by forecasts of economic activity, technology and conservation efforts; and
- the expected state of the regulatory or market environment.

BC Hydro acquires the output and market analysis of a number of third-party forecasts to supplement its long term forecasting activities.

### 2002 compared to 2001

Present prices for both electricity and natural gas remain low compared to 2001 but show signs of a modest recovery in late 2002. Among the reasons for this are:

- the U.S. recession (reducing demand for natural gas and electricity);
- significant new generating supply and natural gas wells coming into service;
- relatively high gas storage inventories (compared to last year and the average for the past five years); and
- improved hydro conditions.

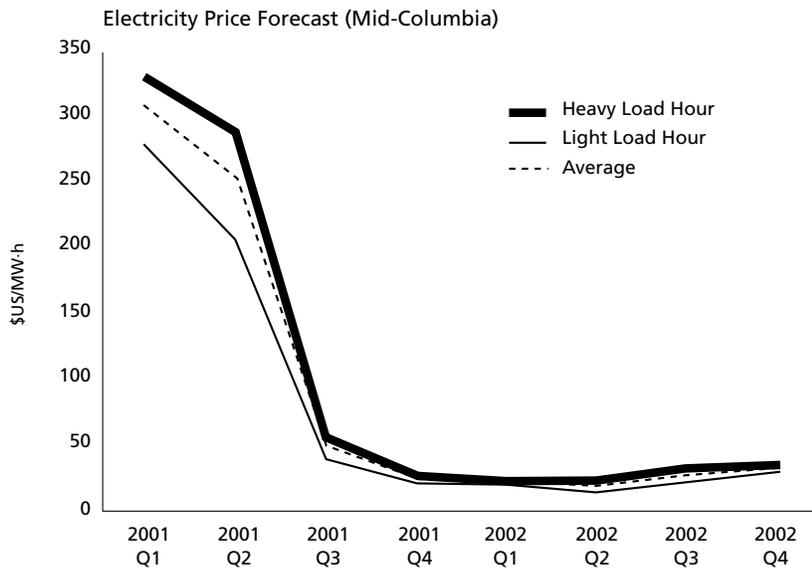
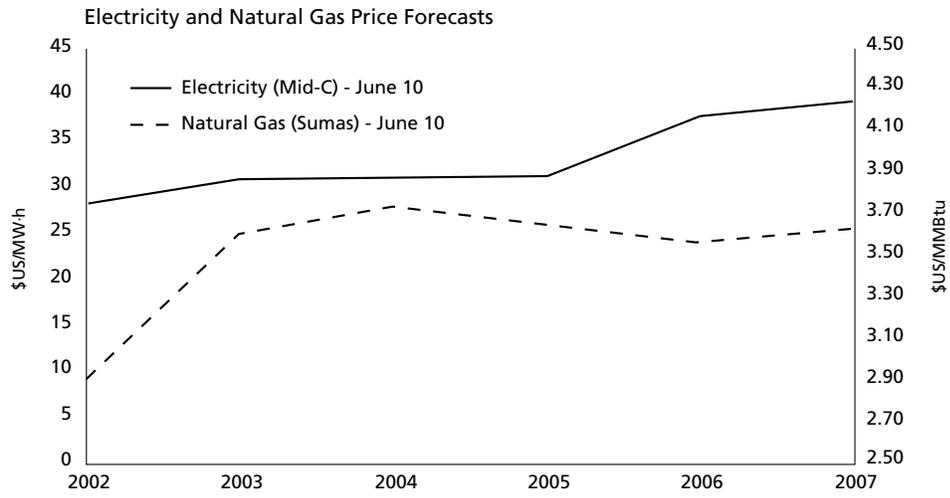
Lower prices have resulted in lower high-load hour to low-load hour differentials, since these tend to be positively correlated with absolute price levels.

### 2002/03 Outlook

Most macro-economic forecasts point to a recovery by later this year. Recent declines in exploration and drilling activity are expected to result in a decline in natural gas production, while the predicted improvement in general economy would serve to tighten the supply-demand balance for natural gas and cause an upward pressure on prices. The combination of higher prices for natural gas and increasing electricity demand should lead to an increase in electricity prices. However, other factors may impair the price recovery, including:

- the sluggish nature of the economic recovery;
- significant new generating capacity; and
- more normal regional hydro conditions.

In the longer term, price expectations are based on a supply-demand balance reflective of average economic growth and demand. Prices of both electricity and gas are expected to grow moderately, modulated by seasonal factors.



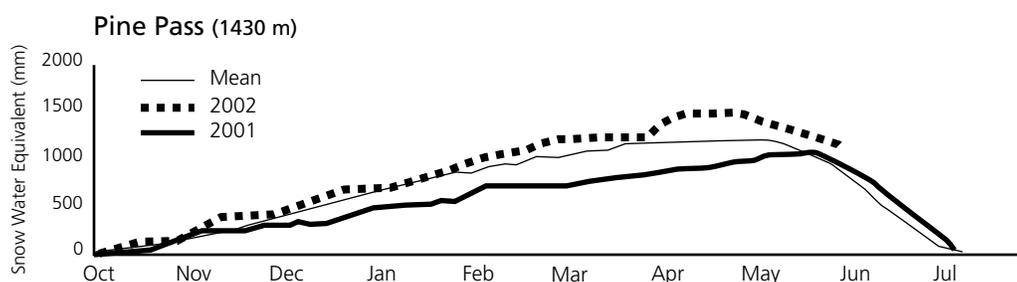
## OPERATIONS

### Snowpack

BC Hydro has significant reservoirs on both the Peace and Columbia River systems, as well as smaller reservoirs on the coast and Vancouver Island. As a result, it monitors snowpack levels closely throughout the year, as they help determine the ultimate water levels in these reservoirs. The most accurate system reading will occur with the onset of the spring freshet (likely in April) but initial forecasts are made by mid-February.

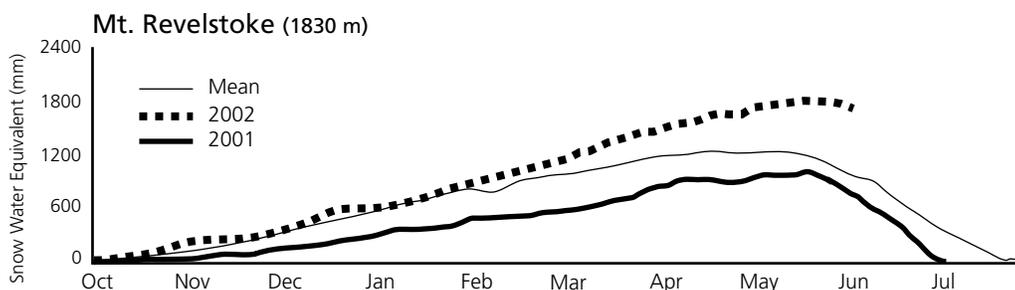
### Williston

The water supply forecast for the Williston reservoir (on the Peace River) for February through September 2002 is slightly above average. The current snowpack conditions in the watershed are near to slightly above average for this time of year. The following plot shows the accumulated snow water equivalent at a representative “snow pillow” recording station within the watershed. For Williston, the average snowpack component (October–April) is 51 per cent, while the average rainfall component (May–September) is 49 per cent.



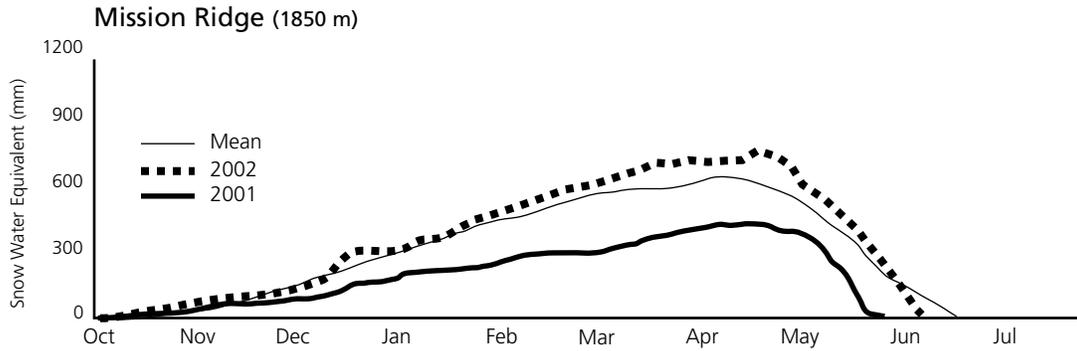
### Columbia

The water supply forecast for the Canadian Columbia River projects for February through September 2002 is slightly below average. The current snowpack conditions in the basin are near average for this time of year. The following plot shows the accumulated snow water equivalent at a representative “snow pillow” recording station within the watershed. For Kinbasket reservoir (the major Columbia reservoir), the average snowpack component (October–April) is 68 per cent, while the average rainfall component (May–September) is 32 per cent.



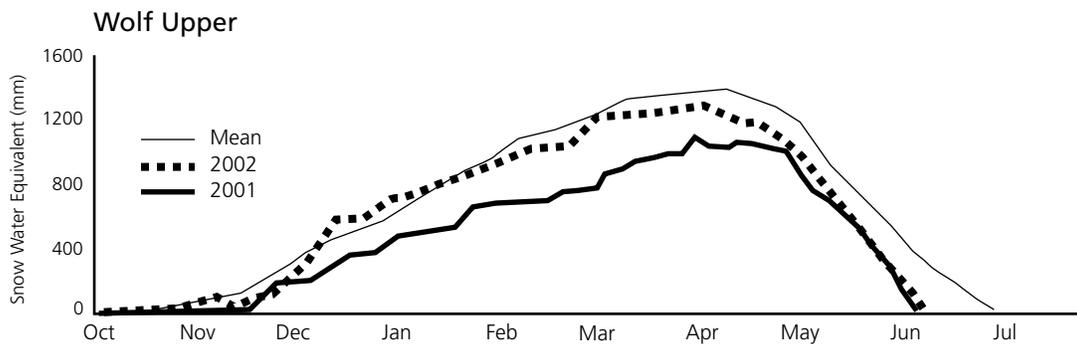
## Bridge River

The water supply forecast for Bridge River for February through September 2002 is near average. The current snowpack conditions in the basin are near average for this time of year. The following plot shows the accumulated snow water equivalent at a representative "snow pillow" recording station within the watershed.



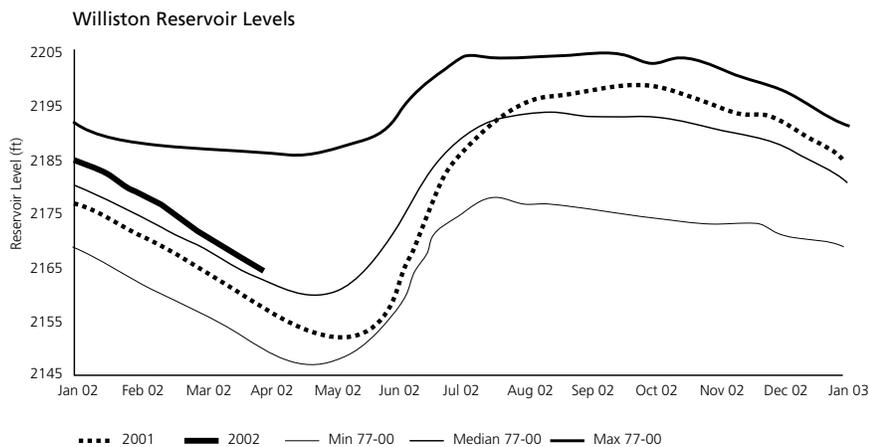
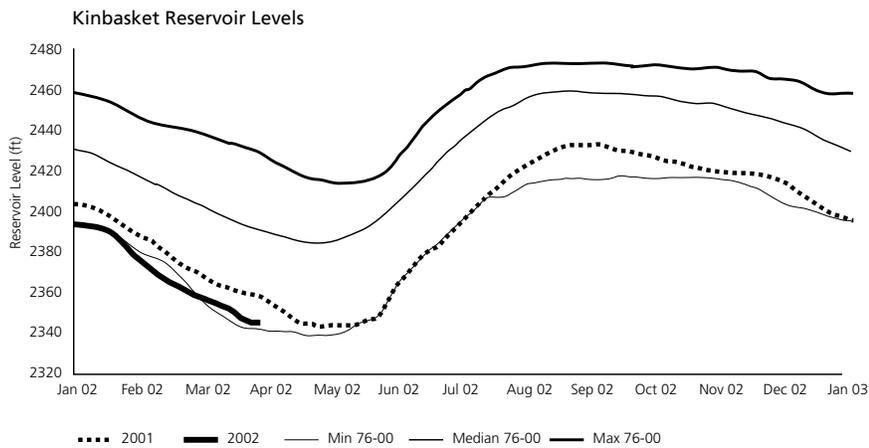
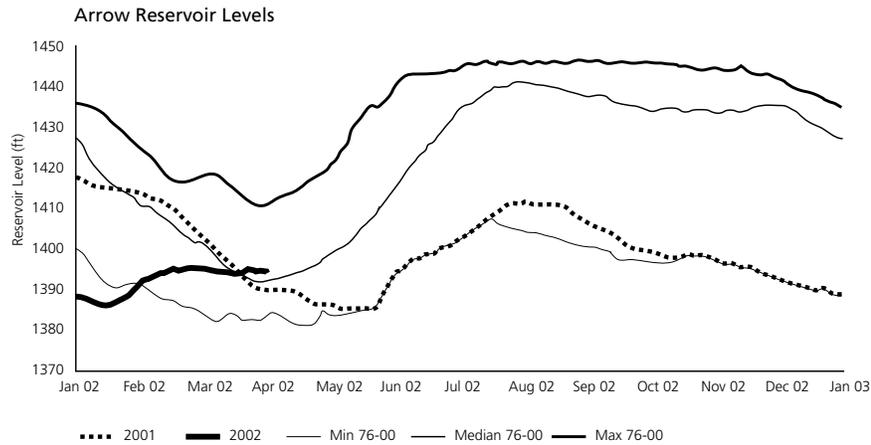
## Coastal Projects

The water supply forecast for projects on the South Coast and Lower Mainland for February through September 2002 is near average, and below average for projects on Vancouver Island. The current snowpack conditions in the basin are near average for this time of year. The following plot shows the accumulated snow water equivalent at a representative "snow pillow" recording station within the region.



## Reservoir Levels

BC Hydro monitors the levels at all of its hydroelectric reservoirs to ensure the most efficient system integration and operation. The relative reservoir levels at any time are a function of precipitation (rain and/or snow that fills the reservoir) and electricity demand (as the water in the reservoirs is used to turn turbines and produce electricity).

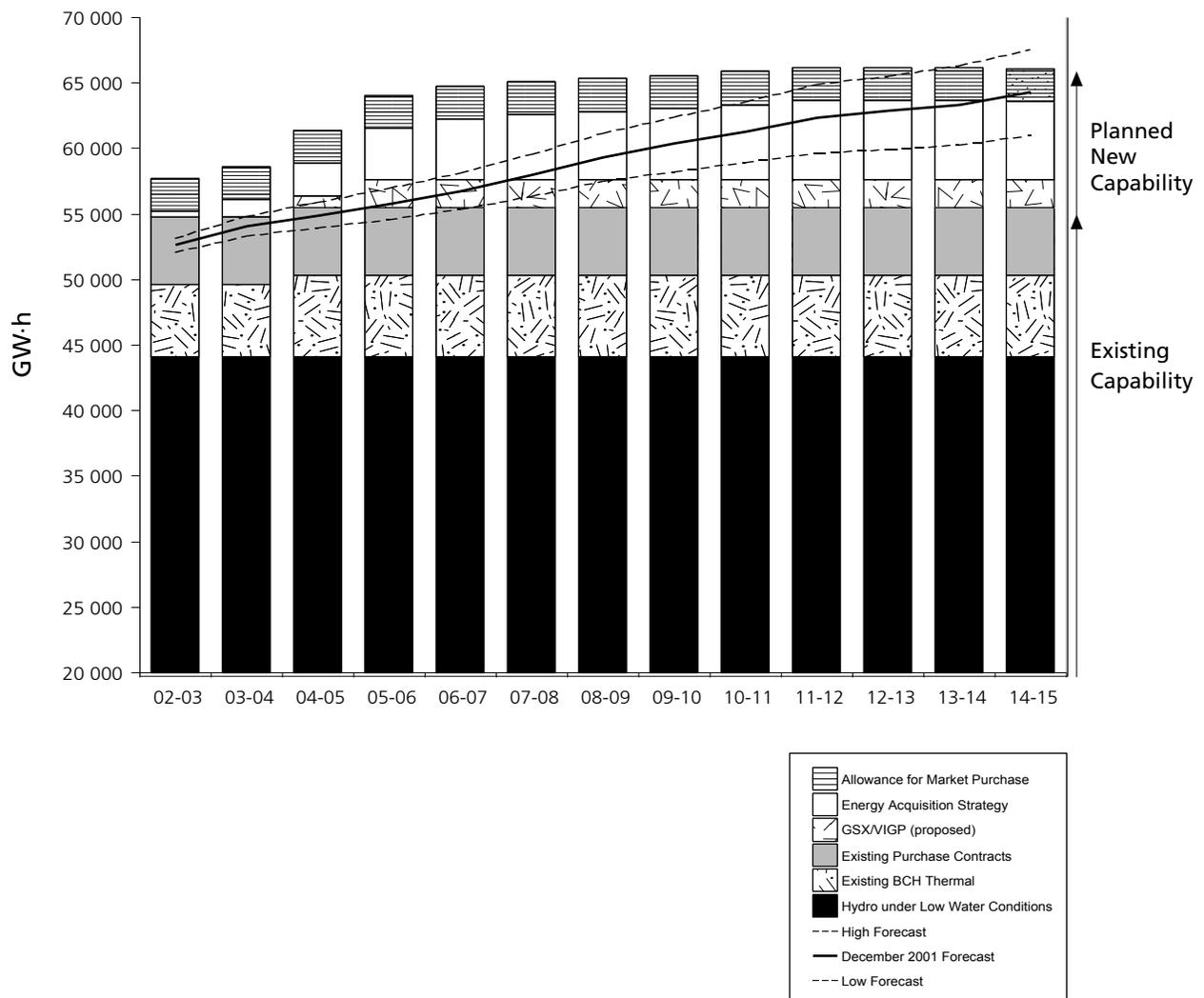


## LOAD RESOURCE BALANCE

BC Hydro plans and operates its system to ensure that it meets the electricity needs of customers both now and for the future. The goal is to make sure there is enough electricity supply to meet the “load” (or electricity demand) by using a range of existing and future resources. These resources – and their relative contributions to the BC Hydro system – are shown in the following charts:

## SYSTEM FIRM ENERGY SUPPLY-DEMAND BALANCE

The System Firm Energy Supply-Demand Balance chart below compares forecast annual energy demand (net of Power Smart) to the energy output of existing (under low water condition) and planned new facilities.



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## ASSUMPTIONS

### Existing Capability

Under "Hydro under Low Water Conditions":

- Lowest historical streamflow conditions
- Full use of storage capability of the major reservoirs
- Contribution from Arrow Lakes Hydro (formerly Keenlyside)

In "Existing BCH Thermal":

- Fully restored capability of Burrard Generating Station (after completion of the Burrard Upgrade project)
- Prince Rupert Generating Station

In "Existing Purchase Contracts":

- Pre-2001 IPP contracts
- Alcan

In "December 2001 Forecast":

- Current Power Smart programs

### Planned New Capability

"Energy Acquisition Strategy" includes:

- additional Power Smart to target 3500 GW·h/year by 2011
- new Resource Smart (including Seven Mile 4)
- contracted new Green IPPs (Miller Creek, the results of the 2001 Green IPP process and the proposed Fall 2002 Call for 800 GW·h/year)

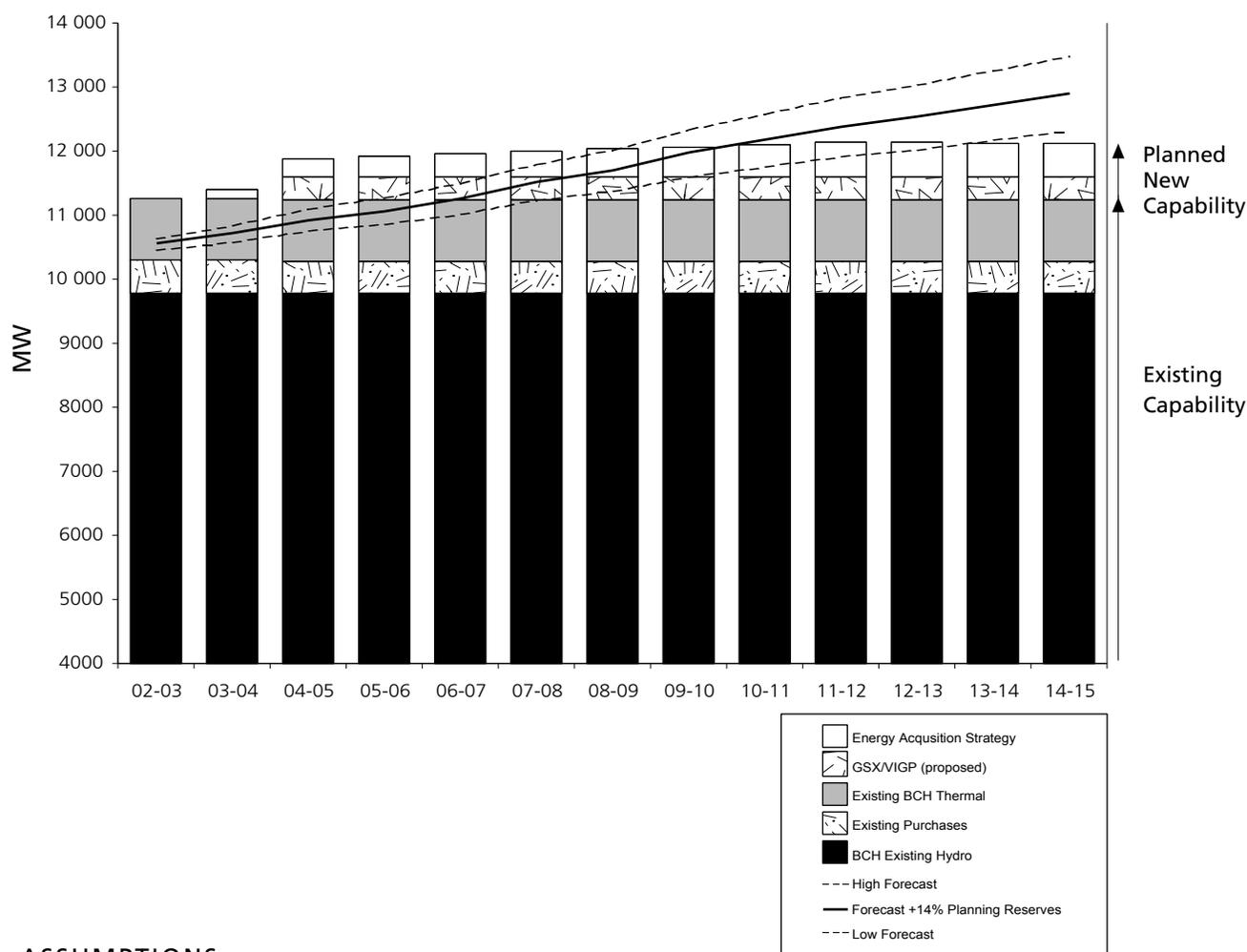
"VIGP" in-service date is November 2004 (as planned)

"Allowances for Market Purchases":

- 2500 GW·h of market purchases or non-firm hydro is included to meet energy reliability criteria

## SYSTEM DEPENDABLE CAPACITY SUPPLY-DEMAND BALANCE

The System Dependable Capacity Supply-Demand chart compares forecast peak electricity demand (peak winter usage) – plus required capacity reserve – to the dependable capacity of existing and planned facilities.



## ASSUMPTIONS

“Planning Reserves” are required under the rules of the Western Electricity Coordinating Council (WECC) should there be an emergency requirement for electricity elsewhere in the WECC. The specific requirement is 14 per cent of generation supply minus an allowance for 400 MW available from other market sources.

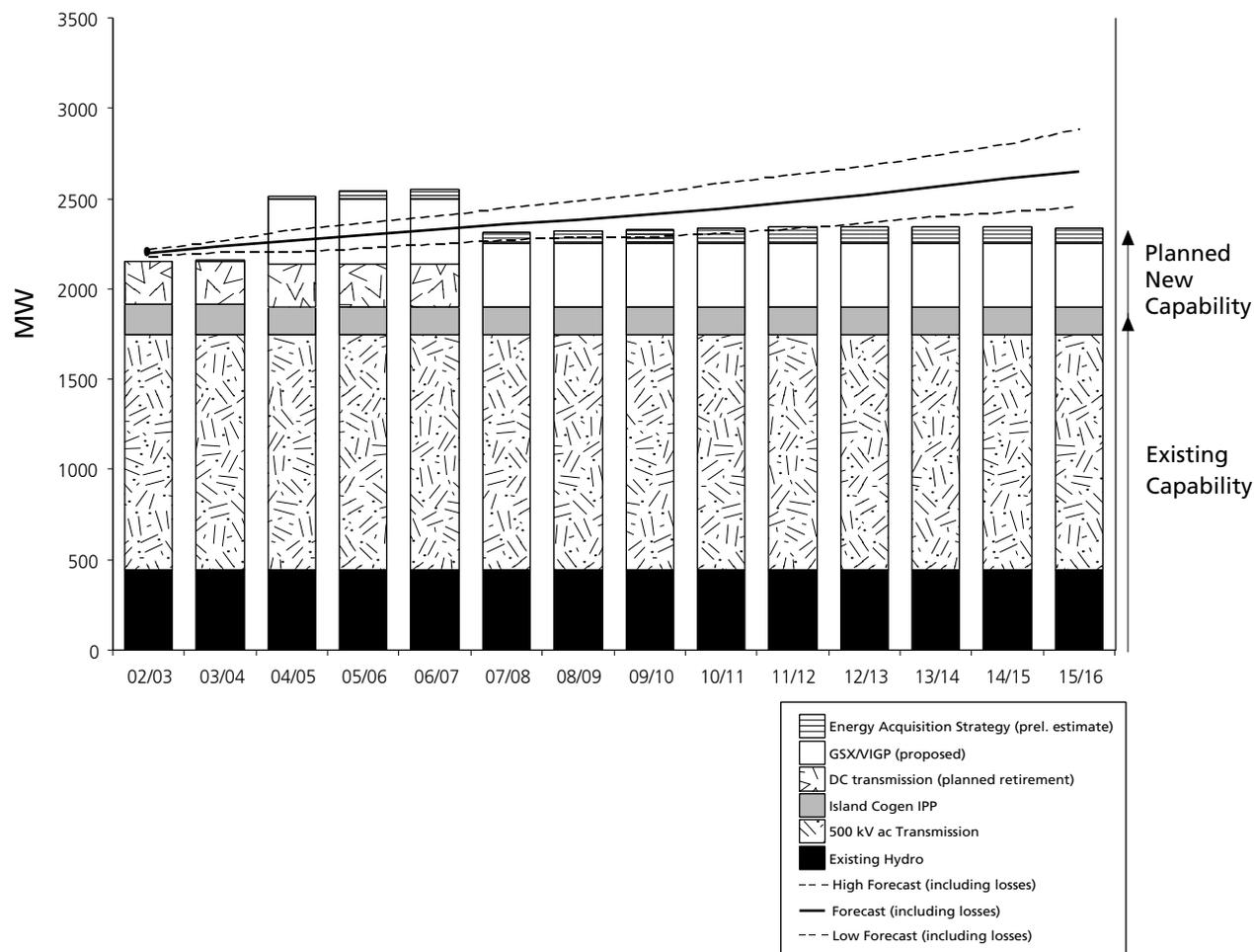
“Energy Acquisition Strategy” dependable capacity is conservatively estimated. That is because dependable capacity – the megawatt output a generator can reliably provide to meet peak electricity demands – is project specific and there are a number of projects that make up this category.

“GSXVIGP” are scheduled – as planned – for fall 2004.

“Forecast” is the December 2001 Load Forecast and it includes current Power Smart programs.

## VANCOUVER ISLAND DEPENDABLE CAPACITY SUPPLY-DEMAND BALANCE

Separate information is provided for Vancouver Island (VI) because that is where BC Hydro's customers are most urgently in need of new electricity generating resources.



### ASSUMPTIONS

“Forecast” is the December 2001 Forecast which includes approved Power Smart.

“Reliability Planning Criteria” are such that the system should be able to withstand loss of any single element with no loss of customer load. Therefore, VI firm supply is planned with the largest element – one alternating current (ac) cable – unavailable.

“Dependable Winter Capacity” of the existing VI hydroelectric system is 448 MW.

“Continuous Rating” of the 500 kV ac cables is 1200 MW. Their short duration overload capability is 1300 MW (shown here).

“HVDC” is the high voltage direct current submarine cable to Vancouver Island. Its remaining firm (dependable) delivery capability is 240 MW, with full retirement planned for 2007.

“Island Cogen IPP” has a winter dependable capacity of 240 MW, but that is limited until GSX is in service.

“Energy Acquisition Strategy” provides additional dependable capacity on Vancouver Island as a result of the new resources acquired.

## LINES OF BUSINESS

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### GENERATION

#### Fiscal 2003 Estimates

Employees (FTEs)	*Capital Replacement Value (\$ Millions)	Capital Expenditures (\$ Millions)
770	\$17,000	\$260

\*Capital replacement value is an estimate of the replacement cost of depreciable assets which is generally determined by applying a construction cost index (Handy-Whitman Index) to the original cost of assets. The Handy-Whitman index is prepared especially for electric, gas and water utilities.

#### Introduction

The Generation Line of Business is responsible for all of BC Hydro's integrated electricity generating facilities and reservoirs in the province. Its value proposition is to be the supplier of choice by providing competitive energy products and services while being profitable and socially responsible. Among the products provided by the Generation Line of Business are Firm and Interruptible Energy, Capacity, Voltage Support, Spinning Reserve and Load Balancing and Following.

#### Benchmarking

According to studies done by Haddon-Jackson Associates and Andersen Consulting between 1999 and 2001, BC Hydro's major generating plants benchmarked in the first or second quartile of comparable utilities in North America in terms of costs and service levels.

#### Projects

##### Georgia Strait Crossing Project

- BC Hydro continued work with Williams Company on the \$260 million Georgia Strait Crossing (GSX) Project, which will provide firm natural gas transportation to Vancouver Island to supply the existing Island Cogeneration Project (ICP) and the new proposed Vancouver Island Generation Project.
- Regulatory applications for the project have been filed with the National Energy Board (NEB) in Canada and the Federal Energy Regulatory Commission (FERC) in the United States. The regulatory process in the United States is almost

complete, and issue of a certificate for the U.S. portion of the project is expected in summer 2002. The Canadian process is ongoing, and the date for the start of a public hearing is expected to be determined in late summer 2002. Detailed engineering, procurement and land acquisition activities continued throughout the year.

- Assuming the public hearing commences in fall 2002, the project in-service date remains October 2004.

##### Vancouver Island Generation Project

- Progress continued on the \$370 million Vancouver Island Generation Project (VIGP), a new high-efficiency natural gas-fired electricity generation facility on Vancouver Island that will help meet customers growing electricity demands.
- During the year it was determined that BC Hydro would build the project at Duke Point in Nanaimo. These were changes from the original plans to build in Port Alberni and to partner with Calpine Canada.
- BC Hydro undertook significant public consultation activities throughout the year. An application to the provincial Environmental Assessment Office (EAO) was filed in mid-June and the in-service date for the project is November 2004.

#### Programs

##### Green Energy

- BC Hydro has made a commitment to meet 10 per cent of new electricity demand from new green energy resources. To help meet that commitment, BC Hydro issued a Call for Green Energy in April 2000.

- As a follow-through on the Call for Green Energy, BC Hydro signed contracts in fiscal 2002 for 19 Green IPPs in the less than 40 GW·h/yr category. In total, they include 16 small hydro, two biomass and one that is landfill gas. All of these projects have met preliminary criteria and are competitively priced against other forms of generation options available to BC Hydro.
- In the fourth quarter of fiscal 2002, BC Hydro offered three contracts totalling approximately 441 GW·h/year to Green IPPs in the greater than 40 GW·h/year category. These contracts were not yet executed by the end of the fiscal year.

## GREEN IPPS

Below is a list of those green IPPs who have agreed to have their projects made public.

Project Name	Location	Company	Capacity	Type
1 Landfill Gas Cogeneration Utilization Project	Lower Mainland	Maxim Power Corp.	5.0 megawatts	Biogas
2 Squamish Power Project	Squamish	SNC Lavalin Constructors (Pacific) Inc.	3.5 megawatts	Biomass
3 Revelstoke Community Energy Project	Revelstoke	City of Revelstoke	4.5 megawatts	Biomass
4 Raging River Project	Port Alice	Raging River Power & Mining Inc.	1.75 megawatts	Small hydro
5 PS Eagle Lake C2 Micro Hydro	West Vancouver	Pacific Cascade Hydro Inc.	0.2 megawatts	Small hydro
6 Brandywine Creek Project	Whistler	Rockford Energy Corp.	7.0 megawatts	Small hydro
7 McNair Creek Project	Gibsons	Renewable Power Corp.	5.0 megawatts	Small hydro
8 Siwash Creek	Lytton	Morehead Valley	0.5 megawatts	Small hydro
9 ZZ Creek (76145) Project	Gold River	Synex Energy Resources Ltd.	3.8 megawatts	Small hydro
10 Tête Creek	Tête Jaune	Lorenz Holdings	2.4 megawatts	Small hydro
11 McKelvie Creek Project	Tahsis	Synex Energy Resources Ltd.	2.9 megawatts	Small hydro
12 Furry Creek	Howe Sound	Eaton Power Corp.	6.9 megawatts	Small hydro
13 Fitzsimmons Creek	Whistler	Ledcor Power Inc.	3.4 megawatts	Small hydro
14 Tsable River Small Hydro	Courtenay	Innergex Inc.	4.5 megawatts	Small hydro
15 Hystad Creek	Valemount	East Twin Creek Hydro Ltd.	6.0 megawatts	Small hydro
16 Pingston Creek Small Hydro	Revelstoke	Canadian Hydro Developers Inc.	30 megawatts	Small hydro
17 Upper Mamquam River Small Hydro	Squamish	Canadian Hydro Developers Inc.	25 megawatts	Small hydro
18 Rutherford Creek Small Hydro	Pemberton	Rutherford Creek Power Ltd.	32.5 megawatts	Small hydro

## Alternative Energy

- A 20-Megawatt demonstration was launched this past year on Vancouver Island to learn more about the potential of near-commercial green technologies that could be viable in B.C. The project involves a mix of 10 MW of wind, 6 to 8 MW of micro hydro and 3 to 4 MW of ocean wave energy. Status of the various components is below:

Project Component	Status
10 MW Wind Energy Project	Preliminary funding to advance detailed project plan approved.  Partnering with AXOR Group Inc. from Quebec  The site selected for the wind turbines is Rumble Ridge near Port Alice.
3-4 MW Wave Energy Project	MOUs signed with UK-based Ocean Power Delivery and Energetech from Australia.  It will be potentially developed near Ucluelet.
6-8 MW Micro Hydro Project	Potential micro hydro projects identified

## Customer Generation Program

- BC Hydro continued preparations for the launch of a new Customer Generation Program during the fiscal year. Subsequently launched May 31, 2002, the goal will be to sign Energy Purchase Agreements for up to 800 GW·h of energy by February 28, 2003.

## Resource Smart

- BC Hydro launched its Resource Smart program in the early 1990s to improve efficiencies at our generation facilities in order to maximize our generation capacity and to help defer the need for construction of new facilities. This past year, major Resource Smart upgrades were underway on:

Project	Completion	Potential GW·h Savings
GM Shrum	2004	242/year
Bridge River	2002	104/year
Seven Mile	2004	302/year
Peace Canyon	2002	52/year

## Dam Safety

- Two BC Hydro facilities undertook major projects as part of our ongoing Dam Safety Program. The Elsie Lake Dam on Vancouver Island completed a significant seismic upgrade, while a dam safety project was initiated at our Seven Mile facility south of Trail, B.C.

## Water Use Plans

Water Use Planning was developed in 1998 in response to increasing demands on our water resources. Water Use Plans (WUPs) are done through a consultative planning process and are intended to take into consideration the unique issues related to the operation of each of BC Hydro's water control facilities. Highlights from the past fiscal year include:

- consultation for Bridge/Seton, Coquitlam/Buntzen, Cheakamus, Seven Mile, Jordan and Shuswap WUPs, which was completed; and
- an additional eight WUPs in progress for Ash River, Campbell River, Duncan Dam, Mica/Revelstoke/Keenlyside, Peace, Puntledge and Wahleach.

The changes in water management recommended in these WUPs will enhance fisheries, recreation, wildlife, heritage and flood control values.

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## Facilities

### Burrard Generating Station

Burrard Generating Station was recertified to the ISO 14001 standard this year. The ISO 14000 series, published by the International Organization for Standardization, is a set of standards used to guide development of an environmental management system (EMS) and to provide a basis on which to audit the results of the system. Burrard's original certification was achieved in 1998.

### Arrow Lakes Generating Station

Arrow Lakes Generating Station is a hydroelectric project at BC Hydro's Keenleyside Dam that is owned by Arrow Lakes Power Corporation (a joint venture of Columbia Power Corporation and the Columbia Basin Trust). BC Hydro has a coordination agreement with Arrow Lakes Hydro and an electricity purchase agreement beginning in January 2003. Electricity generated prior to 2003 is purchased by Powerex under a separate agreement.

### Island Cogeneration Project

The Island Cogeneration Project is a 240 MW combined-cycle cogeneration project owned by Calpine Canada that is located near the Elk Falls pulp mill north of Campbell River. The project achieved commercial operation in April 2002.

### Seven Mile

The Seven Mile Unit 4 Project was initiated in January 2001. The 210 MW addition will cost \$96.8 million and generate 302 GW·h of energy a year. During the year the specifications, tender documents and drawings were prepared and by November the final tender of the 16 main contracts was issued. An accelerated schedule was then put in place to meet the in-service date of April 2003.

# TRANSMISSION

## Fiscal 2003 Estimates

Employees (FTEs)	*Capital Replacement Value (\$ Millions)	Capital Expenditures (\$ Millions)
280	\$10,000	\$150

\*Capital replacement value is an estimate of the replacement cost of depreciable assets which is generally determined by applying a construction cost index (Handy-Whitman Index) to the original cost of assets. The Handy-Whitman index is prepared especially for electric, gas and water utilities.

BC Hydro’s high-voltage transmission system carries bulk electricity from our generating plants to substations across the province, and to interconnection points in the western North American grid to enable electricity trade. This transmission system is the responsibility of BC Hydro’s Transmission Line of Business, whose objectives are to:

- provide Transmission Service for domestic load and electricity trade;
- maximize the utilization of transmission assets;
- ensure transmission system reliability; and
- build a strong and capable workforce.

Products and services of the Transmission Line of Business include Wholesale Transmission Network Services, Wholesale Transmission “Point-to-Point” Services and Interconnections.

### Benchmarking

Work undertaken this past year by PA Consulting indicated that the Transmission business is performing well compared to other leading North American utilities. For the benchmark “transmission efficiency” – measured as the ratio of total expenditures to the number of structure miles in the transmission network – we were second quartile. Our higher costs are attributed to the challenging mountainous terrain and sea crossings in the province. For the measure “substation efficiency” – measured as the ratio of total substation expenditures to total transformation

capability – we were first quartile. This measure indicates how our infrastructure costs relate to the electrical demand we serve.

### Regional Transmission Organizations (RTOs)

BC Hydro collaborated with nine western U.S. utilities to develop a model for a Regional Transmission Organization – RTO West – and by the end of the fiscal year filed Stage 2 of a proposal with the U.S. Federal Energy Regulatory Commission (FERC). This was in response to FERC’s 1999 request for transmission owners under its jurisdiction to develop plans and transfer control and operation of their transmission facilities to independent RTO entities.

While BC Hydro doesn’t fall under FERC jurisdiction, we proactively participated to ensure that the same open, non-discriminatory transmission access which exists in B.C. is available for wholesale market participants throughout the region. Moreover, BC Hydro wants to ensure that transmission congestion issues are managed on an integrated, regional basis. Our proposed participation in RTO West would protect sovereignty over our natural resources and the interests of our employees and customers.

### Infrastructure Investment

BC Hydro extended the life of the high-voltage transmission system to Vancouver Island by completing a submarine cable inspection and refurbishing high-voltage direct current (DC) equipment to improve supply reliability in the short term. We also made crucial repairs to circuits that supply the metropolitan Vancouver area and rehabilitated key transmission links along the Sea-to-Sky corridor. Finally, a 10-year “preventive maintenance” plan was developed to address long-term requirements.

## DISTRIBUTION

### Fiscal 2003 Estimates

Employees (FTEs)	*Capital Replacement Value (\$ Millions)	Capital Expenditures (\$ Millions)
380	\$5,000	\$175

\*Capital replacement value is an estimate of the replacement cost of depreciable assets which is generally determined by applying a construction cost index (Handy-Whitman Index) to the original cost of assets. The Handy-Whitman index is prepared especially for electric, gas and water utilities.

### Introduction

There are over 55 000 kilometres of overhead, underground and submarine distribution lines in B.C., as well as 865 000 power poles. These are the responsibility of BC Hydro's Distribution Line of Business, which is the part of the Crown corporation that directly serves our 1.6 million customers and 6000 non-integrated customers in nine remote communities. Among the products and services provided by the Distribution Line of Business are:

- safe, dependable and reliable domestic energy delivery services;
- extension and connection services to distribution customers;
- new service connections (through BC Hydro's Field Services organization);
- customer care (through BC Hydro's Customer Services organization);
- management of uneconomic extensions and beautification investments; and
- secondary use of distribution assets.

### Benchmarking

BC Hydro's Distribution business performed very well in comparison to a representative group of leading North American utilities, according to a benchmarking study conducted by PA Consulting in 2001:

- **Distribution efficiency (costs/customer) – first quartile.**

This is a ratio of total expenditures to the number of domestic customers in the system and is a commonly used benchmark in the utility industry. Results show that BC Hydro is a top quartile performer in this measure, with a cost of \$153/customer (compared to the \$230/customer first quartile benchmark).

- **Average System Availability Index (ASAI) – second quartile.**

1<sup>st</sup> Quartile: 99.987%      Actual: 99.959%  
 Actual: 99.974%  
 (excluding Dec. 14–16 storms)

This is a measure of overall system reliability, indicating the percentage of time power is kept on during a year. ASAI is also a corporate performance measure. When the impacts of severe weather, such as wind storms, have been factored out, our result has remained stable since the mid-1980s, and is consistently better than the CEA average.

- **Customer Average Interruption Duration Index (CAIDI) – third quartile.**

1<sup>st</sup> Quartile: 1.17 hours      Actual: 2.57 hours  
 Actual: 1.97 hours  
 (excluding Dec. 14-16 storms)

This is a measure of the amount of time an interrupted customer is without power during a year. CAIDI is also a corporate performance measure. Although we have significantly fewer power interruptions than the CEA average, it takes longer to restore service once the interruption has occurred. The main reason is that BC Hydro serves over 90 per cent of the province, covering a much larger service territory and rougher terrain and mountains than most of the utilities in the CEA composite.

BC Hydro also completed approximately 14 600 service connections this year. That was less than the plan of 16 800, something that can be attributed to the slowdown in the economy.

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### **Generator Interconnections**

Companies or customers wishing to connect to BC Hydro's distribution and transmission networks benefited this year as the Office of Generator Interconnections now provides a single point of contact to assist with selecting and executing the appropriate interconnection, transmission or purchase service.

Generator Interconnections allows the generation customer to review technical compatibility, assess the impact of the proposed generator on our provincial grid system and facilities, and implement the interconnection. The process and technical information is available on our Web site for existing and potential generation customers.

### **Service and System Maintenance**

This year BC Hydro continued implementing its leading-edge power outage management tool, PowerOn. PowerOn works by visually representing

the operational state of BC Hydro's distribution network and working with our customer service telephone system to get information to a large number of affected customers, line crews and district offices more quickly. PowerOn helps our line staff more efficiently record service complaints, identify the devices involved and dispatch the appropriate staff.

BC Hydro also implemented a comprehensive 10-year maintenance program for our distribution system based on best industry practices and four key drivers: safety, reliability, environment and asset management. Some of the major maintenance work completed last year included replacement of 5500 poles and over 1000 crossarms that had reached the end of their life, as well as the testing and treatment of 76 000 poles.

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## ENGINEERING SERVICES

### Fiscal 2003 Estimates

Employees (FTEs)	*Capital Replacement Value (\$ Millions)	Capital Expenditures (\$ Millions)
670	\$10	\$3

\*Capital replacement value is an estimate of the replacement cost of depreciable assets which is generally determined by applying a construction cost index (Handy-Whitman Index) to the original cost of assets. The Handy-Whitman index is prepared especially for electric, gas and water utilities.

The creation of the Engineering Services organization brought together all engineering services in BC Hydro into one unit. Its goal is to be recognized as an essential and commercially competitive provider of those engineering services through safe, socially and environmentally compliant solutions.

### Benchmarking

As a newly formed organization, Engineering Services is now developing a financial model to be used as a comparison with commercial financial performance benchmarks. The goal is to be a first quartile performer by April 2004.

### Infrastructure Improvements

Engineering Services provided project management, design, procurement and construction management support to the Generation, Transmission and Distribution lines of business for their BC Hydro infrastructure improvement projects. Examples included:

- the Seven Mile Unit 4 Resource Smart project;
- the \$21 million Lower Mainland/Vancouver Island South microwave project; and
- a distribution automation pilot project in downtown Vancouver.

### Emergency Response

Engineering provides emergency response and technical support to all business units of BC Hydro. This year included providing assistance when the Mica Generating Station generator G1 exciter transformer, high-voltage connection failed, and providing the design support to help repair a 43-year-old oil stop in a 230 kV underground cable circuit in the City of Vancouver that failed explosively. Engineering staff also initiated an end of life assessment of the underground distribution system at Granville Island, which resulted in a fast track replacement project that was substantially completed in the spring of 2002 and minimized the impact on the Island's seasonal business.

### Asset and Risk Management

Engineering provides management and technical expertise to the lines of business to support their asset management and risk management projects. This year examples included:

- providing design and construction management services for improvements to Elsie Dam that will bring the dam up to current dam safety standards;
- participating in several projects to replace key 230 kV transmission lines in the Lower Mainland that will improve reliability and secure the supply of power to critical areas (including downtown Vancouver); and
- working with Distribution to strategically replace end-of-life equipment and equipment that has been proven in-service to be faulty or problematic.

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## FIELD SERVICES

### Fiscal 2003 Estimates

Employees (FTEs)	*Capital Replacement Value (\$ Millions)	Capital Expenditures (\$ Millions)
1460	\$50	\$3

\*Capital replacement value is an estimate of the replacement cost of depreciable assets which is generally determined by applying a construction cost index (Handy-Whitman Index) to the original cost of assets. The Handy-Whitman index is prepared especially for electric, gas and water utilities.

BC Hydro's Field Services organization was created to bring together in one unit all of the Crown corporation's Service Restoration, Maintenance, Construction (Civil, Electrical and Mechanical), Telecommunications Maintenance, Public Safety, and Vegetation and Line Contractor Management services for Transmission and Distribution. Its vision is to be a commercially focused and viable service organization whose objectives include working safely to "keep the lights on," while meeting service and quality expectations at the lowest possible cost.

### Benchmarking

Similar to Engineering Services, Field Services is in the process of developing a financial model to enable benchmarking of labour rates and utilization.

Currently, it is a significant contributor to the first quartile cost performance of the Transmission and Distribution Lines of Business. It is also currently second quartile with respect to the Safety measure of "all injury frequency."

### Service Reliability

During fiscal 2002, Field Services continued to provide BC Hydro customers with a high level of power reliability. During the December windstorm, staff played a direct and significant role in restoring power within 24 hours to the vast majority of 150 000 customers, and within 48 hours to all but a very few. Significant work done earlier in the year on the old and unique HVDC back-up transmission system to Vancouver Island also proved extremely beneficial during this storm. The HVDC system was able to operate efficiently and provide security of supply to Vancouver Island when the major transmission lines to Vancouver Island failed as a result of severe icing.

### Building a Strong and Capable Workforce

Field Services is dedicated to building a highly skilled workforce through its continuing focus on the apprenticeship programs and effective technical and safety training programs. Demographics show that there is a high probability that a significant number of experienced staff are likely to retire within the next two- to five-year period. As a result, over 60 trade apprentice and managerial positions were filled in fiscal 2002 through the Strategic Workforce Planning initiative. This brings the total trainees within Field Services to 85, or approximately eight per cent of the total Field Services regular workforce.

## SHARED SERVICES

### Fiscal 2003 Estimates

Employees (FTEs)	*Capital Replacement Value (\$ Millions)	Capital Expenditures (\$ Millions)
2020	\$300	\$60

\*Capital replacement value is an estimate of the replacement cost of depreciable assets which is generally determined by applying a construction cost index (Handy-Whitman Index) to the original cost of assets. The Handy-Whitman index is prepared especially for electric, gas and water utilities.

### Introduction

The Shared Services organization within BC Hydro provides a range of products and services that include Customer Services, Information Technology, Fleet Services, Financial Systems and Disbursement Services, Property and Office Services, Supply Chain and Human Resource Services. The purpose of bringing all these services together in one organization was to continue to provide the same or better levels of service at a lower overall cost.

BC Hydro is assessing bids from the private sector for a joint venture or other arrangement for the Shared Services Line of Business. Decisions regarding the ultimate ownership of assets currently included in Shared Services and other Lines of Business will be required. Therefore, the replacement costs of assets currently shown for Shared Services and other Lines of Business may change if assets are transferred to or from Shared Services.

### Benchmarking

BC Hydro's Shared Services organization benchmarks very well against other similar organizations. Among the specific results are:

	Quartile
Meters read on schedule	1st
Customer Service satisfaction	2nd
Customer Service all injury frequency	4th
Shared Support Services customer satisfaction	1st
Shared Support Services employee satisfaction	1st
Network Computing Services (NCS) client server operation	1st
Westech client satisfaction	1st

### Customer Service

#### Benchmarking

- **Overall cost/customer – first quartile.**

In a PA Consulting study of 41 North American utilities conducted in 2000, BC Hydro ranked in the top quartile for providing customer services at the lowest cost.

- **Customer satisfaction (call centres) – second quartile.**

In a 2001 study of about 100 companies from a variety of industries that offer call centre customer service, we were in the second quartile of customers who say they are "very satisfied" with the service they receive from BC Hydro.

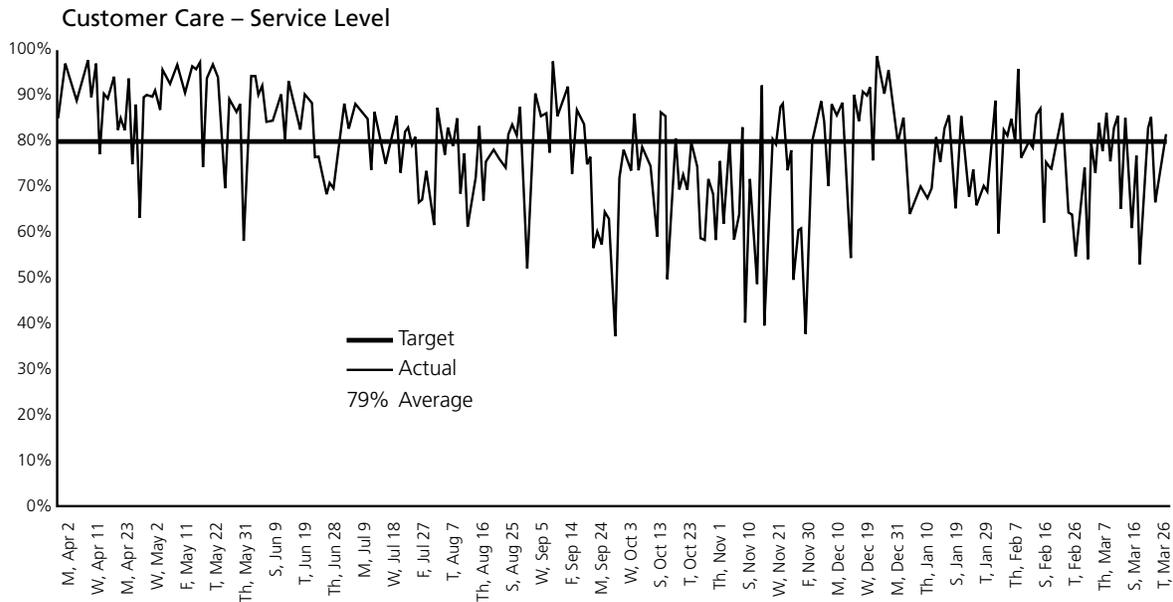
- **Meters read on schedule - first quartile.**

In a PA Consulting study of 41 North American utilities in 2000, we ranked in the top quartile for percentage of meters read on schedule, which facilitates timely, accurate billing.

- **Customer Transaction Follow-up Survey – 64 per cent.**

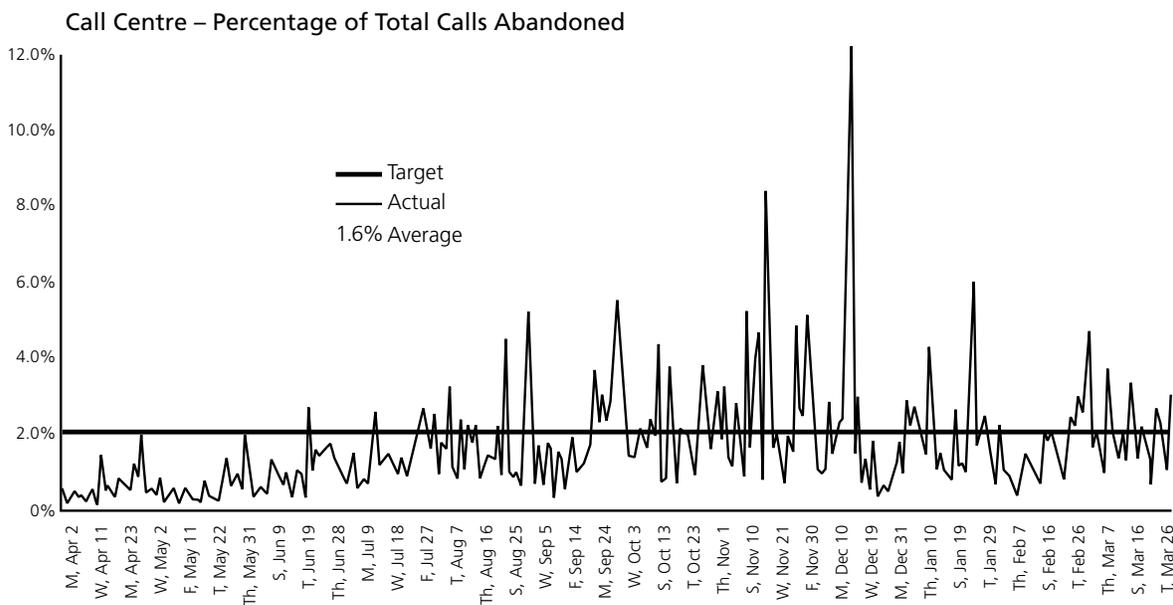
This survey is conducted on a sample of customers who have had contact with a BC Hydro service provider to determine customer satisfaction with the service experience. This measure tracks the percentage of respondents who are very satisfied with call centre service transactions. Our target for the year was 68 per cent.

## CUSTOMER SERVICES' CALL CENTRES



Note: Measurements do not include Sundays or holidays.

Call volumes are usually highest at the beginning and end of each month (when customers move), Mondays, after long weekends, when heating costs rise (January to March), and in late summer (when people relocate to coincide with the school year). High call volumes occur during major outages, when there are bill changes or when a customer's method of daily business with BC Hydro changes.



Note: Measurements do not include Sundays or holidays.

Abandonment peaks (and service level decreases) are associated with specific events such as storms or outages (as was the case for the peaks above).

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## New technology

A new Meter Reading Management system was put in place this fiscal year to more efficiently ready our customers' electric meters, which helps us provide more timely bills. We also piloted a new complaint management system at our Burnaby call centre. The Web-based tool – developed by students in the B.C. Institute of Technology's Information Technology program – tracks complaints logged by call centre agents in real time and monitors how and when complaints are resolved.

## Service Changes

In January, our five Power Smart Centres and 10 walk-in offices across the province were closed. This was due to low and declining traffic and the fact they were used primarily by customers to pay their bills (which is the most expensive way to pay a bill). With a number of equally convenient but much more cost-effective payment options available – such as telephone or online banking and our Pre-Authorized Payment Plan – the closure of the Power Smart Centres and walk in offices will save us \$4 million beginning next year.

BC Hydro also announced that we would no longer accept postdated cheques for payment this year, as this is an outdated, expensive, manual process that no longer makes good business sense. In addition, we introduced Spectrapay, a third-party bill payment service where customers can, for a service fee, use their credit card to pay their bill. Since it was introduced in the fall of 2001, approximately 5000 customers have signed up for Spectrapay's services.

## BC Gas

BC Gas this year announced it would end the customer services contract it has had with BC Hydro since 1988. It will take on this service itself, including providing its customers with a separate BC Gas bill beginning in July 2002. The only service BC Gas decided to continue to have provided by BC Hydro was meter reading. BC Hydro bid and won the five-year contract for BC Gas customers in the Lower Mainland

and Fraser Valley. The contract will generate annual revenue of between \$2.5 million and \$3.3 million.

## Request for Expressions of Interest (RFEI)

BC Hydro issued a Request for Expressions of Interest (RFEI) to the private sector for three of its service areas this year – Customer Services, Westech and Fleet Services. The RFEI is part of BC Hydro focusing on the electricity parts of our business while looking for commercial growth opportunities for the services we provide our customers.

Based on the response to the RFEI, the process was divided in two – one dealing with Customer Services and Westech (called the "Combined Bid"), and the other with Fleet Services.

### a) Combined Bid

By the end of the fiscal year, the submissions for the Combined Bid were shortlisted to two proponents – Cap Gemini and Accenture. Based on further detailed evaluation, Accenture was then chosen as the lead proponent in early April of 2002. At their request, a number of additional services were added for consideration, including:

- Network Computing Services (NCS);
- HR Shared Services;
- Shared Services (which includes Property Services, Financial Services, Disbursement Services, Purchasing Services and Building/Office Services); and
- Financial and Business Services and Supply Chain (including Materials Management Business Unit (MMBU)).

### b) Fleet Services

The submissions for Fleet Services were also short-listed to two proponents by the end of the fiscal year – Mainroad/Fleet Employees and Penske. Work continued early in fiscal 2003 to identify a lead proponent.

The goal for both processes was to have Memoranda of Understanding signed by the summer of 2002 and to have them implemented by late 2002 or early 2003.

## CORPORATE OPERATIONS

### Fiscal 2003 Estimates

Employees (FTEs)	*Capital Replacement Value (\$ Millions)	Capital Expenditures including deferred Demand-site management (\$ Millions)
460	\$400	\$100

\*Capital replacement value is an estimate of the replacement cost of depreciable assets which is generally determined by applying a construction cost index (Handy-Whitman Index) to the original cost of assets. The Handy-Whitman index is prepared especially for electric, gas and water utilities.

### Introduction

BC Hydro, like all companies, has a range of functions that are combined under the heading "Corporate". These include:

- Regulatory Affairs
- Aboriginal Relations
- Strategic Planning and Sustainability
- Finance, Audit and Treasury
- Chief Information Officer
- Corporate Human Resources
- Corporate Communications and Public Affairs
- Power Smart (BC Hydro's Demand-side Management program)
- Corporate Donations
- Freedom of Information Office
- Legal

### Safety

#### Benchmarking

In a Canadian Electricity Association study conducted in 2000, BC Hydro ranked in the third quartile rela-

tive to our peer utilities for frequency of injuries (all incidents, including medical aid and disabling injuries). Significant work has been going on to address these results and, consequently, this past fiscal year BC Hydro achieved an overall 13 per cent reduction in all-injury frequency – well exceeding our target of five per cent. Our overall target for fiscal 2003 is another 10 per cent reduction in all-injury frequency.

### Highlights

Corporate Safety made improvements to the way we approach and manage safety by beginning the modification of our Safety Management System into a "Plan, Do, Check, Act" approach. This "Continuous Improvement Cycle" is similar to quality and environmental continuous improvement systems certified by agencies such as the International Standards Organization (ISO).

Improvements were made this year to our "Incident Investigation Process" to ensure we are identifying both the "immediate" and "root" cause of incidents. While it is always important to address the immediate cause, addressing the root cause is where we can make the greatest impact. Combining this with an enhanced tracking system – which allows us to monitor and follow up on "Corrective Action Plans" – we can make sure everything necessary is done to reduce the chances of the incident happening again.

April 2001 through March 2002	All Injury Frequency			Disabling Injuries			Medical Aids	
	Actual	Target	Actual	Last 12 months			Last 12 months	
SBU	YTD		Last 12 months	No.	Freq.	Sev.	No.	Freq.
BC Hydro	5.3	5.8	5.3	103	2.0	152.5	178	3.4
Customer Service	7.5	8.4	7.5	20	3.4	84.6	24	4.1
Transmission and Distribution	8.3	8.3	8.3	67	3.0	284.0	118	5.3
Executive Opns w/ Customer Services	6.4	5.6	6.4	20	2.9	71.4	24	3.5
Power Supply	3.8	4.8	3.8	10	1.1	39.8	23	2.6
Corporate Groups (including Shared Services)	1.3	1.1	1.3	6	0.4	59.0	13	0.9

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## Demand-Side Management

### Benchmarking

Compared to American utilities, BC Hydro ranks in the top quartile (source: American Council for an Energy-Efficient Economy) for demand-side management initiatives. This is based on energy savings as a percentage of domestic energy sales (more than five per cent) and on our investment in demand-side management as a percentage of revenue (one per cent). In addition, B.C. ranked fourth in the Canadian Energy Efficiency Alliance's National Report Card on Energy Efficiency.

### Power Smart Energy Savings

BC Hydro re-launched its Power Smart energy efficiency program this year with a comprehensive 10-year plan to reach an annual target of 3500 GW-h in new energy savings. This will build on the success of Power Smart since its inception in 1989, which now annually saves enough energy to meet the electricity required to power about 250 000 homes (i.e., ~2,500 GW-h per year) and has saved a total of 21 300 GW-h to date (worth around \$1 billion).

This, the first year of the plan, saw Power Smart surpass its goal for the year of an annual rate of savings of 120 GW-h through initiatives such as:

- 38 GW-h (compared to the target of 25 GW-h) saved by our business customers as part of the "e.Points" program (through which customers who demonstrated their commitment to energy efficiency receive "e.Points" that will be redeemed to be used towards additional Power Smart retrofit projects).
- 15 GW-h saved from our work with schools, universities, colleges and hospitals as part of the Institutional Power Smart programs.
- energy savings of 17.5 GW-h in the Comox Valley and Quesnel as part of the re-launch of Power Smart in these communities.
- the Home Energy Learning Program (h.e.l.p) which resulted in over 15 000 people registering online

to understand where they could use energy more efficiently in their homes.

- the Power Smart LED (light emitting diode) program which was launched with a goal to replace traditional incandescent lights at traffic intersections with LEDs that are 85 to 90 per cent more efficient.

Next year's goal is to double the results from this year, increasing incremental savings by a further 240 GW-h on the way to the overall goal of 3500 GW-h.

### Human Resources

#### Strategic Workforce Planning

BC Hydro has an aging workforce with large numbers of employees becoming eligible to retire over the next few years. These retirements will occur at a time when unprecedented skilled labour shortages are predicted across North America. To ensure that BC Hydro will be able to sustain its core operations, a strategic workforce planning initiative is underway to renew critical workforce capability in the occupational groups that will be most impacted by retirements. Approximately \$11 million had been invested by the end of fiscal 2002 to hire apprentices and trainees in trades, engineering, technical and management positions. Additional funding has been committed to continue this initiative in fiscal 2003.

#### Cornerstones of Leadership

The level of leadership competence at BC Hydro directly impacts its ability to attract and retain talented employees needed to meet its business objectives. One of the programs BC Hydro has put in place to strengthen leadership is Cornerstones of Leadership. Cornerstones is a four-day orientation program for new managers that provides them with an understanding of what is expected of them in the leader-manager role. It exposes new managers to a broad understanding of the organization as a whole, the key strategies, business issues and the industry in which we operate. Five sessions of Cornerstones

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have been held since March 2001 with a total of 107 new managers participating in the program.

### **Personal Development Plans**

Personal development plans (PDPs) were implemented for employees across the organization to further develop the skills and competencies that drive successful business performance. The PDP process places responsibility on managers to communicate with and coach their employees on desired business results, and the onus on employees to take responsibility for enhancing their performance and managing their career development.

### **Renewed Union Agreements**

Three-year renewal agreements were negotiated with the IBEW and the OPEIU with compensation adjustments linked to external market comparisons. The existing Gainsharing Plan was modified to establish an incentive framework that will focus all BC Hydro employees on specific performance objectives aligned to the success of the organization and/or Lines of Business.

### **Aboriginal Relations**

More than 2000 kilometres of BC Hydro's transmission and distribution lines are located on or over 150 First Nations reserves in this province. When traditional territories are included, virtually all of our facilities are on First Nations lands. To maintain access to these facilities and ensure the continued reliable supply of electricity to our customers, BC Hydro is working to build mutually beneficial relationships with Aboriginal people.

### **Community Development**

Our First Nations Community Development Fund, launched in May 2001, helps deal with the fact that BC Hydro pays grants-in-lieu of taxes to municipal governments for our transmission and distribution lines, but not to First Nations for the same facilities crossing reserve lands. In fiscal 2002, we sent funding agreements to 163 bands and exceeded our target by reaching agreements with 120 of them (providing \$1.6 million in grants).

### **Cross-Cultural Training**

BC Hydro continued to offer its award winning cross-cultural training program both inside and outside the company. For example, we are collaborating with Royal Roads University to integrate the program with their accredited Indigenous Corporate Relations Undergraduate Program. We also delivered cross-cultural training to such groups as Manitoba Hydro, the Department of Fisheries and Oceans Canada, and Human Resources Canada.

### **Regulatory**

#### **BC Hydro's Obligation to Serve Self-Generating Customers**

After an expedited process, including sponsorship of a Workshop, the British Columbia Utilities Commission (BCUC) rendered a decision in April relieving BC Hydro of its obligation to supply self-generating customers contemplating arbitrage opportunities with embedded cost energy in excess of their historic load. This saved BC Hydro and its ratepayers a potential cost of \$400 million (from additional energy purchases or in lost electricity trade revenues).

#### **BC Hydro Application for a Distribution Wheeling Rate for IPPs**

After an oral hearing in early May, the BCUC issued a decision on June 1 directing IPPs to pay all connection costs and setting a wheeling rate from the IPP plant to BC Hydro's transmission system that approximated what BC Hydro had proposed during the course of the hearing.

#### **Power Smart Industrial Rate**

This rate – designed to incent large industrial customers to use up to 30 per cent less energy than their historical consumption levels – was approved by the BCUC on June 27th without any review process. Proposed amendments to this rate to reflect changed market conditions were also approved by the BCUC on December 20, 2001.

## SUBSIDIARIES

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### Powerex

BC Hydro's electricity trade activities are the responsibility of Powerex, our wholly owned power marketing subsidiary. Powerex also purchases electricity for BC Hydro's domestic use.

With water levels among the lowest in BC Hydro's history, Powerex put additional emphasis on energy purchases to meet domestic needs and its trade commitments. Despite this, Powerex was also able to work closely with BC Hydro staff to record its second highest revenue year on record by selling selectively into higher-priced markets. Year-end revenues totalled \$3.9 billion for the sale of over 20 500 GW·h. This is second only to fiscal 2001 when revenues totalled \$5.5 billion for the sale of 23 900 GW·h.

Powerex also successfully expanded into eastern markets this year. It received a five-year electricity license from the Ontario Energy Board and approval from the Ontario Independent Market Operator to be a market participant in that province. In addition, Powerex received authorization as a market participant in the Pennsylvania/New Jersey/Maryland power pool and is applying for participant status with other pools in the east, including New York. To properly serve these markets, Powerex established a small office in downtown Toronto which will open early in fiscal 2003.

### Powertech

Powertech, BC Hydro's research and engineering technology subsidiary, provides a wide range of innovative, high-tech services to electric utilities, equipment manufacturers and many other clients internationally.

Powertech worked on a number of projects that will help improve the safety of the electric utility industry, and include:

- writing a technical paper for publication by the Institute of Electric and Electronic Engineers on the risk of explosions if underground cable failures are not identified. The paper outlined appropriate procedures to prevent them, and BC Hydro has incorporated these into its practices.
- testing by the High Voltage laboratory of a number of transformer bushings for BC Hydro that were suspected of having internal faults.
- developing and selling advanced software tools that model a utility's power system or a network of interconnected systems. This software helps operators determine the system's operating limits and therefore allows them to maximize system capacity.

Powertech is finding opportunities outside the electric utility industry. With BC Hydro, the subsidiary built a hydrogen fueling station at their facility in Surrey. It also supported the development of cleaner, low-emission vehicles by developing, testing and proposing standards for essential components of vehicles fuelled by hydrogen and natural gas.

### Westech

Westech Information Systems is BC Hydro's information technology subsidiary company. It was ranked in the top 20 high-tech companies in B.C. by Business in Vancouver magazine for the second year in a row, affirming its role in B.C.'s growing high-tech industry.

Workload was 20 per cent higher than in the previous year and, as a result, employee numbers increased from 350 to over 400 information technology consultants. Thanks to the combined efforts of staff across the company, Westech achieved record annual revenue of over \$45 million, nine per cent above plan.

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Net income was also impressive at approximately \$4.5 million, 50 per cent above plan.

Among the successful initiatives this year were:

- an agreement with Cognos Inc., a world leader in business intelligence software, to become a North American Solution Provider Partner.
- a partnership with GE Network Solutions to develop Network Asset Manager, a new geospatial software product that will use GE Smallworld's network and spatial technology to help identify and plan both predictive and preventive maintenance of electric and gas utility networks.
- formation of a PeopleSoft practice to expand its PeopleSoft business and promote its expertise throughout North America.

### **BC Hydro International Ltd.**

BC Hydro International (BCHIL) was a wholly owned subsidiary of BC Hydro that provided technical and management expertise to the electrical power industry worldwide.

As a result of business conditions that had a negative impact on BCHIL's viability, the decision was taken in December 2001 to wind down BCHIL's business operations. Subsequent to that decision, no further work commitments were accepted by BCHIL.

## TRIPLE BOTTOM LINE

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### Introduction

In 2000, BC Hydro committed to becoming a sustainable energy company and adopted a “triple bottom line” approach to managing our business in support of environmental, social and economic responsibility. Triple Bottom Line (TBL) reporting provides stakeholders with a snapshot of our performance across the three bottom lines and allows BC Hydro to benchmark performance with other organizations to ensure we continue to remain in the forefront as a leader of sustainability.

For the first time, BC Hydro is including TBL performance within the Annual Report. A more detailed overview of our TBL performance will also be available on BC Hydro’s Web site.

### Benchmarking

Benchmarking studies completed last year by investment advisory firm Innovest ranked BC Hydro first in our industry in environmental and social performance. Canada’s first-ever in-depth assessment of corporate sustainability reporting conducted by Stratos Inc., an Ottawa-based environmental consulting firm, also placed BC Hydro second among 57 companies who produce TBL and sustainability annual reports. And in an assessment through a social responsibility gap analysis conducted by Solstice Consulting, we were found to perform well in relation to standards and benchmarks for formal governance processes, marketplace ethics, employee programs and benefits and safety.

### Indicators

#### Greenhouse Gas Intensity (*projections in italics*)

	2004	2003	2002	2001	2000	1999	1998
tCO <sub>2</sub> e/GW·h	<i>30.1</i>	<i>23.3</i>	<b>34.2</b>	125.5	41.6	24.8	34.7

The numbers shown above are “Actual GHG Intensity” in tonnes of carbon dioxide equivalents (a standard measure for GHG emissions) per gigawatt-hour of energy generated, and include emissions from BC Hydro facilities, from independent power producers contracted by BC Hydro, and from net power imported by BC Hydro. They do not include purchased offsets or reductions accrued from power exports.

### Indicators

Newly evolving performance indicators demonstrate BC Hydro’s accountability to managing business across the three bottom lines. Each year, we are aligning our TBL indicators more closely with the Global Reporting Initiative guidelines – an internationally accepted sustainability reporting framework that will enable organizations to more effectively benchmark performance against one another. Some of our key TBL indicators are included below, with the full complement of more than 60 indicators available on our Web site.

### Environmental Responsibility

As a part of BC Hydro’s commitment to the Canadian Electricity Association’s Environmental Commitment and Responsibility Program, we use ISO 14001 consistent environmental management systems to provide a comprehensive framework for managing our daily operations in an environmentally responsible manner through a process of continual improvements. Environmental management systems have been developed and implemented in our Generation and Corporate business areas. Remaining systems covering our Transmission, Distribution and Shared Services areas are expected to be in operation by December 2002.

## Non-Compliance with Provincial Standards

	2002	2001	2000
Number of incidents (fish)	32	29	10
Number of incidents (pesticide)	3	0	1

Fish incidents refer to those reportable under the Fisheries Act, Water Act, Fish Protection Act, or under the Water License Agreements issued to the individual generating facilities. Pesticide incidents are those which are reportable under the Canadian Environmental Protection Act, Pesticide Products Act, Waste Management Act, Special Waste Regulations, or Pesticide Product Control Act.

## Total Volume of Petroleum and Oil Spilled and Number of Legally Reportable Spill Incidents

	2002	2001	2000	1999	1998
Number of incidents	34	34	36	37	38
Total volume (L)	7675	11 714	13 150	5323	932

Reportable petroleum spills are any amount over 100 litres to land or any amount to water. We use this measure to assess the frequency and severity of environmental incidences and as a proxy for the overall adequacy of systems and practices relating to compliance.

## Landfill Diversion Rate

	2002	2001	2000	1999	1998
Per cent of total non-hazardous solid waste	63	63	53	48	38

Landfill diversion rate is a measure of what percentage of our total solid, non-hazardous wastes was prevented from going to landfill due to reuse, refurbishment and recycling programs. These programs save money as well as landfill space.

## Special Wastes Shipped

	2001	2000	1999	1998
Solids (kg)	574 916	303 495	226 320	240 221
Liquid (L)	673 472	520 240	504 604	414 947

Special wastes are materials with hazardous properties that are no longer suitable for their original use. By law, they require special documentation, handling, storage, shipping and treatment prior to reuse, recycling or disposal. Amounts shown do not include shipments of contaminated soil.

## Sulphur Hexafluoride (SF<sub>6</sub>) Gas Leakage Rate

	2001	2000
Per cent of total inventory	2.4	2.8

SF<sub>6</sub> is used to cool and insulate electrical equipment to prevent arcing and outages. Unfortunately, it is also a powerful greenhouse gas with no viable substitute. BC Hydro continues to look for ways to reduce losses while replacing older, leak-prone equipment with newer, smaller units that leak less and contain less gas.

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## Highlights

### Water Protection

#### Fish and Fish Habitat

- We reached a significant milestone in our 2002 White Sturgeon Recovery Initiative, a partnership with agencies, public and First Nations, with the release of 10 000 hatchery-reared juvenile sturgeon into the Columbia River. The program is a long-term effort to boost recovery of white sturgeon stocks in the Canadian section of the river.
- In partnership with the community and local contractors, BC Hydro recontoured a tributary fan in the Columbia River to help prevent fish stranding. The work allows water to drain more easily without trapping fish and their eggs in pools.
- As a component of our large river sustainability-indexing program, assessments were completed of the abundance and distribution of kokanee in our Kinbasket and Revelstoke reservoirs. A follow-up to earlier stock enhancement efforts, the work determined the population has doubled in one reservoir and increased 75 per cent in the other over two generations.

### Land Protection

#### Vegetation Management

- The first draft of the Rights-of-Way Pest Management Plan was prepared and includes all standards, guidelines and operating procedures for implementing integrated vegetation management along rights-of-way.
- BC Hydro's new safety program requires that all contractors submit a safety plan before they can bid on BC Hydro contracts. A minimum standard of electrical awareness was established and the Utility Tree Workers Safety Guide was rewritten to ensure procedures are followed.
- Standardized work procedures for vegetation management were developed to ensure work is performed in an effective and efficient manner as part of our 20-year work management plan. An inventory of the vegetation occurring on the rights-of-way is being developed to assist with planning how and when the work will be implemented.

### Waste and Materials Management

- We continue to effectively manage polychlorinated biphenyls (PCBs), eliminating our inventory in storage in fiscal 2002. Our facility to destroy PCBs in liquids, treated and recycled more than 691 500 litres of transformer oil last year.
- BC Hydro recovered over 2616 tonnes of materials in fiscal 2002, led by 1215 tonnes of scrap metal, 618 tonnes of ceramic insulators and 329 tonnes of paper. Other materials we regularly divert from landfills include cardboard, wood poles, toner cartridges, fluorescent tubes, drycell batteries and food organics.

### Air Protection

#### Local Air Emissions

- BC Hydro's Burrard Generating Station produced 0.4 per cent of the GVRD inventory of nitrogen oxides and volatile organic compound emissions that contribute to ground-level ozone pollution in the region.

#### Greenhouse Gas Emissions

- Our greenhouse gas (GHG) emissions increased to 6.7 million tonnes in 2001, largely because low water levels at our major reservoirs required us to import more power from non-hydro sources and increase generation at our natural gas-fired Burrard facility by about 28 per cent.
- We remain one of North America's lowest emitters among utilities, but demand for power is growing in B.C. and most growth will be met from cost-effective and proven thermal sources. The resulting increase in GHG emissions are being limited through:
  - Power Smart customer efficiencies, which avoided 2663 GW·h of energy consumption to our base and 1.4 million tonnes of GHG emissions in 2001.
  - Internal energy efficiency programs that provided 578 GW·h in energy gains and reduced emissions by 360 000 tonnes in 2001.
  - The purchase of cleaner energy from IPPs that reduced emissions by 1.5 million tonnes in 2001.

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## Social Responsibility

Last year BC Hydro introduced a Corporate Social Responsibility (CSR) program to build a greater understanding of our company's social bottom line performance. As the company transitions to Lines of Business, each business area will be responsible for adapting CSR into their work practices. BC Hydro became a member of Canadian Business for Social Responsibility and helped the organization develop its "Good Company Guidelines."

## Highlights

### Safety

- Safety was identified as a corporate priority for fiscal 2003, with a vision of zero injuries in the workplace.
- We have adopted a set of safety principles to guide our leaders/managers in the pursuit of our vision. During fiscal 2002, we partnered with DuPont, a recognized leader in safety training, to prepare our managers with the skills necessary to regain our role of an industry leader in safety.

## Indicators

### Public Accidents Involving BC Hydro

	2002	2001	2000	1999	1998
<b>Number of incidents</b>	<b>942</b>	995	1046	1278	1284

Measures include any public incidents that involve our system including vehicle accidents that cause damage to our poles, lines or other infrastructure. While we have no direct control over public accidents, we increase spending on public awareness programs if the number of incidents increases. This measure does not include motor vehicle accidents.

### Visitors to BC Hydro Recreation Sites (Calendar Year)

	2001	2000	1999	1998
<b>Number of visitors</b>	1 354 890	1 243 172	1 269 715	1 426 711

BC Hydro has enhanced recreational opportunities in many of the watersheds in which it has facilities. The number of day visits is considered a proxy for the success of these improvements.

### Return to Work Program (Calendar Year)

	2001	2000	1999
<b>Cost savings (net \$'000's)</b>	819.2	436.6	1,732.5

The program helps employees who have been absent due to occupational or non-occupational injury or illness integrate back into the workplace in a safe and timely manner. Savings for fiscal 1999 are the combined cost savings for the 14 months ended December 31, 1998. The cost savings for fiscal 2001 are estimated using 67 per cent of total salaries (actual savings will vary from 67 per cent to 75 per cent depending on program use and actual cost savings accrued).

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## Employees

- New recruitment and selection guidelines were developed and training was implemented for managers to help ensure equitable hiring practices. Our commitment to ensuring an inclusive and respectful workplace was recognized with a Diversity Award for Business from the Surrey-Delta Immigrant Services Society.
- The BC Hydro Employees Community Services Fund (HYDRECS) raised \$1,033,518 in 2002 and made a special contribution of \$160,000 to the Multiple Sclerosis Society of Canada. HYDRECS, the largest employee fund in B.C., collected contributions from 41 per cent of our employees last year.
- BC Hydro Employees' Multicultural Society (HEMS) celebrated its 11th anniversary. This group organized many cultural educational events and activities to celebrate and promote acceptance of the wide range of diversity amongst our employees.

## Education

- BC Hydro delivered over 500 safety-related presentations to 35 000 program participants, including elementary school students, construction workers and emergency response personnel. Other efforts included providing \$50,000 to purchase the Climate Change Action and Awareness education kits from the Pembina Institute of Appropriate Development and distributing them to 560 secondary schools in B.C. We also distributed an electrical safety video to 565 B.C. schools.
- We opened our new Stave Falls Visitor Centre in 2002. Housed at the redeveloped generating site's original 1912 powerhouse, the facility features an historic gallery, a science centre with theatre and interactive displays and an alternative energy forum.

## Relationships

- BC Hydro maintained its network of Community Relations staff throughout B.C. to interact with stakeholders on a daily basis. Staff provided information about our operations and consulted on issues with local residents and other stakeholders, and with First Nations representatives. Consultations typically focused on capital projects, operations and local issues.
- BC Hydro contributed \$1.25 million to over 500 non-profit arts and culture, Aboriginal, education and environmental organizations. We also provided over \$144,000 in scholarships to students who excelled in academics, and who are leaders in their schools and communities. This included five recipients of the new Sustainability Scholarship Program for students enrolled in an environmental or resource management program.

## Economic Responsibility

Sound fiscal management as referenced in other sections of this report helps to deliver the profits that keep us in business. We aspire to operate efficiently,

provide maximum value to customers and diversify our business to ensure continued financial strength.

## Indicators

### New Green Energy

	2005 Plan	2004 Plan	2003 Plan	2002 Plan	2002 Actual to March 02	
GW·h	700 to 1000	450 to 500	350	350	498	441
Number of contracts	3 to 5	5 to 10	5 to 10		19 signed	3 at offer

"Contracts" refers to actual Electricity Purchase Agreements. In order to be considered "Green" by BC Hydro, the power must be generated from renewable sources, meet all applicable regulations and standards, and have minimal environmental and social impacts.

### Internal Energy Efficiency

	2002	2001	2000	1999	1998
*Generation Energy Efficiency (per cent)		99.4	99.6	99.7	99.6
*Transmission & Distribution Energy Efficiency (per cent)		96.5	96.4	93.9	92.2
Energy Generated (GW·h) per FTE	7.27	8.58	9.36	9.5	9.9
Energy Transmitted (GW·h) per FTE	11.75	12.77	13.16	12.43	11.09
Energy Distributed (GW·h) per FTE	5.58	5.64	5.85	5.83	5.78

\*Data generated over a calendar year.

FTE means Full Time Equivalent Employee.

Generation efficiency is calculated by dividing the gross amount of electricity generated at our facilities by the sum of electricity our facilities use and losses that occur during generation. It does not include imports or purchases. Transmission and distribution (T&D) efficiencies are calculated by dividing the gross amount of power reaching the T or D network by losses from sending the power down our lines and converting or conditioning it at substations and pole top transformers. Energy generated, transmitted or distributed per employee is one measure of our productivity. Our averages are competitive with other Canadian utilities – public or private. The efficiency indices are not directly comparable to Canadian Electricity Association averages due to differences used in calculating them.

### Strategic Research & Development (*projections in italics*)

	2003	2002	2001	2000	1999
Expenditures (\$ million)	3.4	3.7*	3.8	4.1	4.8

\*Does not include funding to R&D from the Sustainability Action Plan.

BC Hydro's Strategic R&D Program champions the long-range discovery, development and application of new technologies that have the potential to enhance the strategic position, competitiveness and sustainability of BC Hydro's generation, transmission and distribution Lines of Business. We continue to invest strategically in R&D to maintain and enhance both our intellectual and technological advantage. Examples include development of high-pressure hydrogen storage and dispensing for hydrogen-powered vehicles, technologies for asset life extension and condition monitoring, technologies for increasing the reliability and utilization of generation and power delivery assets, and technologies for improving customer power quality and utilization of electricity.

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## Highlights

### First Nations

- Our Aboriginal Business Partnership Program, in its third year, received over 200 applications for funding – about a 90 per cent increase over the previous year. The program provides grants of up to one-third of start-up costs to a maximum of \$15,000 to new or existing Aboriginal businesses wishing to expand. To reflect the increase in interest in the program, funding was doubled to \$300,000 this year. The 33 successful applicants included businesses involved in eco-tourism, welding, forestry management, an online networking service, fashion design, online map services, retail sales, hay farming, lifestyle training and a native plant nursery.

### Steam Supply

- We signed an agreement to supply steam from our Burrard Generating Station to the adjacent Imperial Oil loco Terminal Facility. The agreement reduces operating costs for Imperial Oil and reduces total local emissions. Commercial delivery of steam to loco began in May 2002.

### Hydrogen

- BC Hydro continued to pursue hydrogen as a potential business growth opportunity, and as a means of investing in energy sustainability. Through the BCHydroGEN™ program, established in 2001, BC Hydro and its wholly owned subsidiary Powertech Labs built a hydrogen fueling station at the Powertech facility in Surrey, B.C. BC Hydro also converted three natural gas vehicles to operate on a mixture of 51 per cent hydrogen and 49 per cent compressed natural gas. The air emissions from these vehicles are well below the California Air Resources Board's (CARB) standard for Super Ultra Low Emissions Vehicles (SULEV). These vehicles will be used in BC Hydro's fleet (helping reduce overall emissions), for public education and for demonstration purposes with potential customers.

## CORPORATE GOVERNANCE

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### STATEMENT OF CORPORATE GOVERNANCE PRACTICES

BC Hydro's Board of Directors is appointed by the Lieutenant-Governor in Council. While Directors are selected to reflect the industrial, economic, social, ethnic and regional diversity of British Columbia, appointees also include individuals with the appropriate balance of business expertise and experience necessary for overseeing a large commercial enterprise.

The present Board was appointed in September 2001. Since that time Directors have worked hard to gain a fuller appreciation of the Corporation's business activities and an understanding of emerging issues.

BC Hydro established a new governance framework in 1997 and while the Corporation is proud of what has been accomplished since that time, it is committed to improving its processes to ensure that good governance practices continue. With that in mind, upon its appointment last fall the Board established three standing Committees whose mandates are to focus on Audit and Risk, Human Resources and Corporate Governance issues.

Certain BC Hydro Board members, as well as other external individuals with specific business expertise, have also been appointed to serve on our Subsidiary Boards of Directors, thereby ensuring an effective communications flow and reporting relationship between subsidiary and parent entity. For more information on the composition of our Board, its Committees and our Subsidiaries, see pages 91–93.

In its desire to act, and be seen to act as an ethical Corporation, BC Hydro and its Subsidiaries have adopted a Code of Conduct that applies equally to directors and employees. The Director and Employee Code of Conduct can be viewed in its entirety on BC Hydro's Web site at [www.bchydro.com](http://www.bchydro.com).

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## DIRECTORS, OFFICERS AND SENIOR MANAGEMENT OF BC HYDRO

### BOARD OF DIRECTORS

Lawrence I. Bell	Wanda C. Costuros	Alice D. Laberge	Jack Weisgerber
Stephen T. Bellringer	Elmer P. Derrick	Nancy D. Olewiler	
Michael Costello	Kenneth J. Finch	Peter J. Powell	

### OFFICERS AND SENIOR MANAGEMENT

Lawrence I. Bell <i>Chair and Chief Executive Officer</i>	Robert G. Elton <i>Executive Vice-President, Finance and Chief Financial Officer</i>	C. Shawn Thomas <i>Senior Vice-President, Public Affairs and Power Smart</i>	Glen S. Smyrl <i>Vice-President, Engineering</i>
Michael Costello <i>President and Chief Operating Officer</i>	David A. Harrison <i>Executive Vice-President, Shared Services and RFEI</i>	Ronald J. Threlkeld <i>Senior Vice-President, Transmission</i>	Gayle L. Stewart <i>Vice-President, Customer Services</i>
	J. Gary Rodford <i>Executive Vice-President, Generation</i>	Brian Demerse <i>Vice-President, Human Resources</i>	Bev Van Ruyven <i>Vice-President, Power Smart</i>
	Raymond A. Aldeguer <i>Senior Vice-President, Legal, Regulatory Affairs and General Counsel</i>	Dennis Maniago <i>Vice-President, Field Services</i>	Valerie C. Lambert <i>Treasurer</i>
	Alexander (Sandy) Gillies <i>Senior Vice-President, Distribution</i>	Yakout Mansour <i>Vice-President, Grid Operations and Interutility Affairs</i>	Debbie C. Lamming <i>Assistant Secretary</i>
	Bruce Sampson <i>Senior Vice-President, Strategic Planning and Sustainability</i>	Gary N. Sherlock <i>Vice-President, Business Development and Controller</i>	Bob Steele <i>Chief Information Officer</i>
			Myra E.M. Watson <i>Corporate Secretary</i>

As at March 31, 2002

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## COMMITTEES OF THE BOARD OF DIRECTORS

EXECUTIVE	AUDIT & RISK MANAGEMENT	CORPORATE GOVERNANCE	HUMAN RESOURCES
Larry Bell, Chair	Alice Laberge, Chair	Nancy Olewiler, Chair	Stephen Bellringer, Chair
Michael Costello	Wanda Costuros	Stephen Bellringer	Elmer Derrick
Alice Laberge	Nancy Olewiler	Elmer Derrick	Ken Finch
Jack Weisgerber	Peter Powell	Jack Weisgerber	Alice Laberge

## ADVISORY COMMITTEE

### PEACE RIVER/ WILLISTON RESERVOIR

Jack Weisgerber, Chair	Bob McNabb (Chetwynd)	Ron Terlesky (Mackenzie)	Donny Van Somer (Kwadacha)
Leigh Summer (Hudson's Hope)	Don Bourassa (Dawson Creek)	Denise McGowan (Mackenzie)	
Gwen Johansson (Hudson's Hope)	Sean Moffatt (Taylor)	Darwin Pimm (Fort St. John)	

As at March 31, 2002

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## SUBSIDIARIES

### Powerex Corp.

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#### BOARD OF DIRECTORS

Lawrence I. Bell  
Michael Costello  
Wanda C. Costuros  
Robert A. Fairweather  
Nancy D. Olewiler  
Kenneth G. Peterson  
Peter J. Powell

#### OFFICERS

Lawrence I. Bell  
*Chair*

Kenneth G. Peterson  
*President*

Robert G. Elton  
*Executive VP, Finance and  
Chief Financial Officer*

Douglas J. Little  
*VP, Trade Policy & Development*

Myra E.M. Watson  
*Secretary*

Debbie C. Lamming  
*Assistant Secretary*

### Powertech Labs Inc.

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#### BOARD OF DIRECTORS

William A. Best  
Kenneth J. Finch  
Prabha Kundur  
J. Gary Rodford  
Ronald J. Threlkeld

#### OFFICERS

Ronald J. Threlkeld  
*Chair*

Prabha Kundur  
*President*

Nigel Austin  
*VP, Finance & Business Support*

Myra E.M. Watson  
*Secretary*

Debbie C. Lamming  
*Assistant Secretary*

### Westech Information Systems Inc.

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#### BOARD OF DIRECTORS

H.D. Les Harris  
David A. Harrison  
J. Gary Rodford  
Robert J. Steele

#### OFFICERS

David A. Harrison  
*Chair*

H.D. Les Harris  
*President*

Daniel R. Bowditch  
*VP, GIS and Energy Business  
Solutions*

Arthur W. Kuiper  
*VP, Business and Employee  
Services*

John C. Lam  
*VP, Integrated Solutions*

Rod Rockliff  
*VP, Customer and Corporate  
Solutions*

John H. McArthur  
*Managing Director, Marketing  
and Sales*

Myra E.M. Watson  
*Secretary*

Debbie C. Lamming  
*Assistant Secretary*

As at March 31, 2002



BC HYDRO

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