



# Quick Facts

For the year ended March 31, 2003

## Corporate Mission

BC Hydro's corporate mission is to provide integrated energy solutions to our customers in an environmentally and socially responsible manner.

## Business of BC Hydro

British Columbia Hydro and Power Authority is a provincial Crown corporation. 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, with more than 80 per cent produced by major hydroelectric generating stations on the Columbia and Peace rivers. Electricity is delivered to customers mainly through an interconnected system of more than 74,000 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.

## Facts of Interest

- Net Income of \$418 million for the twelve months ended March 31, 2003, was \$15 million higher than that earned during the same period last year. Before the transfer from the Rate Stabilization Account, net income of \$352 million was \$94 million higher than that earned in the prior year. The increase in net income was primarily due to lower energy costs related to lower market prices and a decrease in energy purchases required for domestic use as a result of improved water inflows, which increased 18 per cent over the prior year. Finance charges declined by 16 per cent over last year, due to lower interest rates and the positive impact of a stronger Canadian dollar.
- On the supply side, precipitation during fall and winter was well below normal. This contributed to below-average snowpacks in most areas of the province. The situation improved in March, due to significantly higher-than-average precipitation. Overall inflows are projected to be 94 per cent of average in 2003/04.
- Domestic tariff rates, rates BC Hydro customers pay for electricity within B.C., remained frozen and have not increased since April 1993. These rates continue to be among the lowest in North America.

## Energy Facts

### Definitions

**power** = how much electricity is consumed by customers (or produced by power generators) at any instant in time

**energy** = how much is consumed (or produced) over a period of time

**capacity** = the maximum sustainable amount of energy that can be produced or carried at any instant

*Example: a car engine's horsepower rating is its energy capacity.*

### Units of power

- 1 kilowatt (kW) = 1,000 watts
- 1 megawatt (MW) = 1,000 kilowatts (or 1 million watts)
- 1 gigawatt (GW) = 1,000 megawatts (or 1 billion watts)

### Units of energy

- 1 kilowatt hour (kWh) = 1,000 watts for 1 hour (1,000 watt hours)
- 1 megawatt hour (MWh) = 1,000 kWh
- 1 gigawatt hour (GWh) = 1,000 MWh

(Note that the abbreviations for prefixes follow metric convention, so kilo is k, while mega and giga are capitalized. The abbreviation for watt is W.)

### Power to Energy ratios — rule of thumb

- Power to energy — for thermal electric: MW x 8 = GWh per year
- Power to energy — for large hydro: MW x 5 = GWh per year

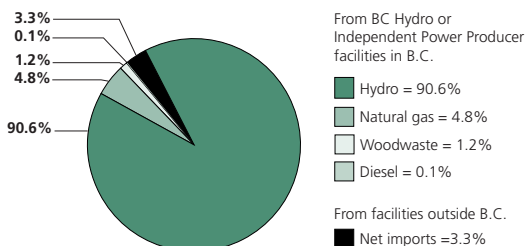
### Comparison statistics

- The average household in the BC Hydro service area uses about 10,000 kWh per year.
- A large industrial customer, such as a pulp mill, might use 400 GWh in a year, equal to the consumption of 40,000 households.
- A typical large office building of 20–25 storeys will consume 5 GWh in a year, equal to the consumption of 500 households.
- A large "big box" retail outlet will consume 3.5 GWh per year, or roughly the equivalent of 350 households.
- 1 MWh of electrical power contains the same amount of energy (work capability) as:
  - 0.6 barrels of oil
  - 90 cubic metres of natural gas
- 1 foot of water in Williston Reservoir is on average about 200 GWh per year
- A 1 MW micro hydro plant produces about 5 GWh per year of green energy

## Financial Information (in millions)

	2003	2002
Revenues	\$ 4,407	\$ 6,311
Net income	\$ 418	\$ 403
Capital and Demand-Side Management program expenditures	\$ 741	\$ 545
Capital assets	\$ 9,793	\$ 9,510
Net long-term debt	\$ 6,849	\$ 6,889
Rate stabilization account	\$ 21	\$ 87

## BC Hydro System Power Supply (2002/2003)



## Operating Statistics

	2003	2002
<i>Customers at March 31</i>		
Residential	1,442,597	1,424,505
Light industrial and commercial	183,188	182,025
Large industrial	133	132
Other	3,092	3,064
Electricity trade	176	145
Total	1,629,186	1,609,871
<i>Electricity sold (gigawatt hours)</i>		
Residential	15,024	15,170
Light industrial and commercial	16,757	16,446
Large industrial	15,179	14,513
Other	1,717	1,672
Electricity trade	31,182	20,666
Total	79,859	68,467
<i>Revenues (in millions)</i>		
Residential	\$ 923	\$ 930
Light industrial and commercial	893	874
Large industrial	516	482
Other energy sales	88	89
Miscellaneous	55	75
Electricity trade	1,932	3,861
Total	\$ 4,407	\$ 6,311
<i>Average revenue (cents per kWh)</i>		
Residential	6.1	6.1
Light industrial and commercial	5.3	5.3
Large industrial	3.4	3.3
Other energy sales	5.1	5.3
Electricity trade	6.2	18.7
<i>Average annual kilowatt hour use per residential customer</i>	10,476	10,695
<i>Peak one-hour demand, integrated system (megawatts)</i>	8,481	8,692
<i>Lines in service</i>		
Distribution (kilometres)	56,437	54,451
Transmission (circuit kilometres)	18,284	18,025
Number of employees <sup>1</sup>	6,013	6,144

<sup>1</sup> Includes full and part-time employees. On April 1, 2003, about 1,600 employees were transferred to Accenture Business Services of British Columbia.

## Generating Capacity in kW

Hydroelectric*	Kilowatts (kW)
Aberfeldie.....	5,000
Alouette.....	9,000
Ash River.....	27,000
Bridge River.....	466,000
R Buntzen.....	72,800
Cheakamus.....	157,000
R † Clayton Falls.....	2,000
Clowhom.....	33,000
Elko.....	12,000
Falls River.....	7,000
R John Hart.....	126,000
Jordan River.....	170,000
Kootenay Canal.....	580,000
Ladore.....	47,000
La Joie.....	25,000
Mica.....	1,805,000
V Peace Canyon.....	694,000
R Puntledge.....	24,000
V Revelstoke.....	1,980,000
Ruskin.....	105,000
R Seton.....	48,000
Seven Mile.....	594,000
V Shrum, G.M.....	2,730,000
R Shuswap.....	6,000
Spillimacheen.....	4,000
V R Stave Falls.....	91,000
R Strathcona.....	64,000
R Wahleach.....	63,000
Walter Hardman.....	8,000
Whatshan.....	54,000
	<u>10,008,800</u>

### Thermal

Burrard.....	912,500
Fort Nelson.....	45,000
Keogh.....	44,000
Prince Rupert.....	46,000
	<u>1,047,500</u>

### Diesel Generation

† Ah-Sin-Heek.....	7,200
† Anahim Lake.....	3,650
† Atlin.....	2,650
† Bella Bella.....	3,300
† Dease Lake.....	3,980
† Eddontenajon.....	2,200
† Masset.....	11,374
† Sandspit.....	9,650
† Telegraph Creek.....	2,300
	<u>46,304</u>

**Total Capacity.....** 11,102,604

\* Maximum sustained generating capacity  
R Has recreational area  
V Has visitor centre  
† Non-integrated area (NIA)

### Transmission Lines in Service

	Circuit Kilometres
500 kV lines.....	5,675
360, 287 and 230 kV lines....	4,113
138 kV lines.....	4,743
60 kV lines.....	3,753
Total.....	<u>18,284</u>

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