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## **ENERGY TRADE**

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- What it is**
- Energy trade is possible because BC Hydro’s bulk transmission network is interconnected with Alberta and the western United States. This transmission network links BC Hydro with a market for the purchase and sale of wholesale electricity outside the province.
- How it is done**
- Energy trade activities are carried out by Powerex, a wholly-owned subsidiary of BC Hydro, established in 1988.
  - Energy trade in Canada is regulated by provincial governments. The federal government regulates exports from Canada. Powerex holds permits from the National Energy Board, which outline the terms and conditions of their trade activities.
  - Powerex also received Power Marketing Authorization from the U.S. Federal Energy Regulatory Commission in 1997, allowing Powerex to conduct wholesale power sales and purchases directly in the U.S.
- Why BC Hydro buys & sells electricity**
- Energy trade activities help optimize BC Hydro’s electric system resources and provide significant economic benefits to BC Hydro customers.
  - Energy purchases help BC Hydro balance its system to meet domestic demand when there is a supply shortage in the system (e.g., due to such factors as low water inflows and increases in demand), or when it is more economic to do so.
  - Energy sales help balance the BC Hydro system when there is excess water in the system (i.e., sales are only made after ensuring that domestic demand can be met). Sales generate additional revenue for BC Hydro, which helps keep electricity rates low for all British Columbians.
- When BC Hydro buys & sells electricity**
- With the flexibility of the large reservoirs behind its major dams, BC Hydro can make economic decisions about when to use the water to generate electricity and when to use other sources, such as purchases.
  - The economic decisions are based on buying electricity from our neighbours in Alberta and the western U.S. when prices are generally lower (e.g., non-peak periods) and selling excess electricity to our neighbours when prices are generally higher (e.g., peak periods).
  - The flexibility of BC Hydro’s predominantly hydroelectric generating system enables Powerex to take advantage of differences in demand — and prices — between the winter and summer months, and between heavy-use workday hours and lighter-use evening hours.

**Net purchases & sales of electricity**

- BC Hydro has been a net purchaser of electricity from the market in seven of the past ten years. BC Hydro has had to purchase up to 14 per cent of domestic requirements during this period.
- Electricity purchases from the market are required when, over the course of a year, BC Hydro has a need for more energy than is available from its hydro system, based on natural inflows of water, and any deliveries from contracts with independent power producers in B.C.

**Explaining differences between BC Hydro & NEB numbers on electricity trade**

- BC Hydro's data is based on its audited financial results, as published in its Annual Reports, and reflects the circumstances of the BC Hydro system.
- Statistics Canada/National Energy Board (NEB) use different data sets for electricity trade. Any discrepancy between the figures may be a result of one or all of the following:
  - The NEB calculates data based on the calendar year instead of a fiscal year used by BC Hydro.
  - The NEB includes contribution numbers from other utilities and power generators, like Fortis BC, Columbia Power and Teck Cominco.
  - The NEB does not include transactions between BC Hydro and Alberta.
- For example, in fiscal 2008, BC Hydro was a net seller of electricity as a result of above average water inflows. However, data provided by Statistics Canada/NEB suggests that British Columbia was a net purchaser of electricity in calendar 2008.

**BC Hydro: Net Purchases and Sales (GWh)**

Year	Net (Purchases) / Sales
1996	(1,452)
1997	6,057
1998	6,745
1999	1,499
2000	2,222
2001	(1,993)
2002	(5,238)
2003	(1,754)
2004	(5,118)
2005	(7,381)
2006	(4,352)
2007	(6,141)
2008	1,171

*Source: BC Hydro Annual Reports*