

# BC Hydro 2004 Integrated Electricity Plan

## ***Demand-Supply Outlook***

To meet customer needs, the demand for electricity must be balanced with supplies to meet that demand. The Demand-Supply Outlook compares the forecast of future electricity demand to the capability of BC Hydro's existing sources of electricity supply. This indicates when new resources need to be added.

A 20-year demand forecast is updated annually. It includes two key factors:

- the total amount of electricity that customers are forecast to use; and
- the highest amount of electricity that customers are forecast to use at any one time (called peak demand).

The forecast of future demand includes information about:

- population growth;
- economic activity;
- the amount of electricity used for different purposes such as heating, lighting and industrial machines; and
- the amount of electricity that customers are expected to save as a result of Power Smart.

To establish the future supply of electricity, the amount available from and the costs of the following supply options are considered:

- existing generators;
- projects that could be developed by independent power producers;
- expansions and efficiency improvements at BC Hydro's existing generating facilities (Resource Smart), and
- imports from the wholesale electricity market (Alberta and the western U.S.).

In addition to looking at the province as a whole, BC Hydro also considers individual regions. Planners consider limits, such as the maximum amount of electricity the transmission system can carry in any one area. Ensuring a reliable electricity supply may mean that transmission lines and other facilities must be constructed or reinforced.