



BC Running Short on Electricity Where will new power come from?

By Dan Potts

British Columbia now consumes more electricity than it produces. Blessed for decades with a surplus of electricity, those days are behind us. We must now rely on others beyond our borders for a growing portion of our electricity needs. It is an uneasy situation.

Several jurisdictions in North America such as California and recently Ontario have experienced serious problems due to their reliance on volatile external power markets for their electric power. There is no reason for that to happen here in BC. We have many resource options to choose from to meet our future needs – thermal plants fired by natural gas, wood waste, or coal; wind; run-of-the-river hydro; Site C large hydro and others. The challenge will be in making the right choices and at what cost.

BC Hydro has actively promoted conservation through their “Power Smart” program for several years and will continue to do so. But even with this very aggressive program, consumption is expected to grow, particularly in light of the improved performance of BC’s economy. In 2005, BC imported 6,896 giga-watt hours (GWh) of electricity to meet domestic needs, 12% of our consumption and enough to supply over 650,000 homes. Without new generation, by the year 2020 we will be short on in-province generation by 14,000 GWh’s and forced to import a full 25% of our energy needs.

BC Hydro is projecting that the Burrard Thermal Generation facility will supply up to 6,000 GWh per year. However, Burrard Thermal is inefficient by current standards, and with the high cost of natural gas is no longer a source of reasonable cost energy for the BC Hydro system. While the facility still has a role to play as an emergency back-up for the Hydro system, using Burrard to produce 6,000 GWh a year would increase BC Hydro’s total energy costs by at least \$300 million per year compared to the historic costs of buying that amount of power from import markets.

Bringing on new sources of supply can take years of planning, engineering, and construction. We need to get on with the job if we are to continue to maintain the valuable competitive and employment advantage of low cost, reliable electric power that British Columbians currently enjoy.

Keeping the cost of the new electricity as low as possible is critically important to BC’s future. Ultimately it will be the ratepayers – BC Hydro customers – that pay for the new facilities and if the choices we make today result in expensive electricity, consumers will be unhappy, industrial and commercial manufactures will be less competitive and ultimately BC’s economy will be negatively impacted, affecting everyone.



To meet current and future demand, BC Hydro needs to develop an aggressive plan to acquire new low cost electricity and to consider all possible options. The huge shortfall we are facing will require a mix of resources, both large and small. Site C alone can potentially deliver 4,000 GWh's, but even if we had approval now, it could take up to 10 years to build. Coal is BC's most abundant energy source and new technology makes generating electricity from a large coal fired generating plant environmentally sound, predictable and reasonably low cost. While run-of-the-river hydro and wind may have a valuable place in BC Hydro's portfolio, they are typically small and dependent on weather conditions. We have no particular preference for any one generating technology; in fact new electricity supply should come from a balanced range of different options. Our only concern is that the process to determine those new sources of electricity not be biased in favor of expensive less reliable options.

Regardless of the approach, developing new electricity sources and the necessary transmission capacity to distribute it will involve debate and controversy. While we all may have our favorite approach, it is clear that for BC Hydro to fulfill its commitment to serve the province, new low cost electricity resources must be developed, and soon. To be successful in this effort, BC Hydro will need support from every level of government and the community.

Dan Potts is an expert in electricity matters and is Executive Director of the Joint Industry Electricity Steering Committee (JIESC), which represents the major industrial users of purchased electric power in BC's pulp and paper, mining and mineral processing, and electro-chemical industries, directly employing more than 15,000 British Columbians in their electric power intensive operations.