

**B-44 Upgrade Circuit Breakers, \$257,800**

Q. Provide a copy of the research that has (*sic*) been undertaken with regard to the problems that other utilities and owners of DCF/DCVF Breakers have experienced.

A. The engineering study of Hydro's air blast breakers included a review of the experience of other utilities. The other utilities that were studied included: Hydro Québec, CF(L)Co, TransAlta Utility, New Brunswick Power, Sask Power, Manitoba Hydro, Alcan – BC, and Alcan QC.

The information gathered from the other utilities focused on: age, operating duty, types of operating problems, nature of failures (i.e. rupture or explosion), porcelain condition, porcelain cement growth, testing, on-line monitoring systems, air leaks and air drying, maintenance practices and tactics, support from the manufacturers, and availability of spare parts. From this research, it was learned that Hydro Québec, CF(L)Co and Manitoba Hydro had either refurbished breakers or were in the process of doing so. Research results and related documentation have not been assembled into a report.