

1 Q. **B-45, Upgrade Circuit Breakers, Various Sites, 1,677,000**

2 How has it been determined by Hydro that "...for new high voltage circuit breakers  
3 the only option available on the market today is SF6 circuit breakers"?

4

5

6 A. Hydro has determined that "...for new high voltage circuit breakers the only option  
7 available on the market today is SF<sub>6</sub> circuit breakers" from its engineering and

8 procurement experience. Air Blast and Oil Circuit Breakers are no longer

9 manufactured and vacuum type breakers are only manufactured up to 36 kV. It

10 should also be noted that in northern climates SF<sub>6</sub> is mixed with either CF<sub>4</sub> or N<sub>2</sub> to

11 maintain the interrupting capability at very low temperatures.