

1 Q. Reference: Upgrade Power Transformers, Volume II, Tab 14, Page 19  
2 *“Many utilities in North America are in a similar position as Hydro in that they*  
3 *have aging infrastructure and are seeking the most economic and reliable solution*  
4 *to this problem as it requires significant investment. There are many documented*  
5 *papers from various transformer owners on the subject of aging transformer*  
6 *infrastructure and various methods to deal with this issue. The majority have*  
7 *considered using condition assessment tools, either internally or through an*  
8 *outside vendor, to help with the decision to either upgrade or replace power*  
9 *transformers.”*

10 Has Hydro compared its use of condition assessment tools with current use by  
11 other North American utilities? If so, please provide details of the comparison.  
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14 A. The development of Hydro’s condition assessment tools were based upon  
15 recommended testing from Original Equipment Manufacturers (OEMs), discussions  
16 with other Canadian Utilities and research on transformer asset management  
17 practices for North American utilities. Hydro is aware of at least four Canadian  
18 utilities that use similar inputs as Hydro in their condition assessment tool to arrive  
19 at an overall priority ranking or transformer asset health index, as some utilities call  
20 it. The common inputs are typically: Dissolved Gas Analysis; Oil Quality; Power  
21 Factor; and physical condition. It is also important to note that well known North  
22 American companies that market power transformer condition assessment tools,  
23 (such as, ABB, Weidmann and Doble Engineering), use the same common inputs  
24 into their transformer condition assessment tools.