Q. **Deferral of 2015, 2016 and 2017 Supply Costs Application**
Is non-spinning reserve, assuming it is available within 10 minutes, suitable to help in part to meet the loss of the largest unit criterion? Given that UFLS is necessary in any event, should non-spinning 10 minute reserves be used for reserve purposes under Hydro's circumstances?

A. Underfrequency Load Shedding (UFLS) in an isolated system is necessary to bring supply and demand into balance, in order to avoid system instability and cascading outages, and in the event of a loss of a large generating unit. In large interconnected networks, UFLS is a rare event and typically, following the loss of a large generating unit, a utility will instantaneously draw upon its neighbours, usually under reserve sharing arrangements, until its 10 minute reserve is activated within its own system. In this manner the requirement for customer interruption is avoided. This precludes the requirement to maintain online spinning reserve equal to the largest generating unit.

While Hydro accepts that UFLS and brief customer interruptions are necessary to protect the overall integrity of the system, Hydro does not believe that offline reserve should be used to meet the loss of the largest unit criterion in an isolated system,[1] as this would not permit returning supply and demand into balance within 10 minutes without a sustained outage to customers. Further, a sustained customer interruption could potentially be extended in the event of a failed start of an offline generating unit.

[1] Hydro is reviewing its reserve criteria as an interconnected system with the recent and planned HVdc additions of the Maritime Link and Labrador-Island Link, respectively.