Q. **Reference: Supply Cost Deferrals 2015, 2016 and 2017 Application Evidence, Page 14, lines 1–3 and lines 6-8.**

"*The data shows that for UFLS events prior to 2014, when Hydro had been operating with online reserves lower than the largest online unit, customer restoration times of eleven to sixteen minutes for UFLS events were not uncommon.*"

and

"*Since implementing a spinning reserve target to cover the loss of Hydro's largest generating unit, customer restoration typically begins within 1-2 minutes and is typically complete within 6 minutes.*"

Is the 5-10 minute reduction in the duration of UFLS events implied in the two cited passages the only benefit to customers of Hydro's dispatch of standby units in advance of contingencies? If not, please describe the other benefits with reference to specific events.

A. Firstly, as noted in Hydro's evidence Section 2.5 Alternatives to Hydro's Approach, page 14, lines 12-20, Hydro notes that had its current operating philosophy not been employed during the period customer restoration times would have increased by an additional 30-40 minutes and a greater number of customers would have been impacted. The 5-10 minute reduction noted in the question does not consider changes to the Island Interconnected System preceding the 2015-2017 period including system load growth, concentration of load on the Avalon Peninsula, and higher unit unavailability, as noted in Hydro's evidence. If the previous UFLS events

(i.e. those with the eleven to sixteen minute restoration time) had happened in the current system without the current operating philosophy, the associated events would have been larger in magnitude and of longer duration.

The reduction in the duration of UFLS events following unit trips is not the only benefit to customers of Hydro's dispatch of standby units in advance of contingencies, rather another benefit is increased likelihood of avoidance of UFLS events and associated customer impact following unit trips.

Finally, Hydro's dispatch of generating units to maintain minimum spinning reserve requirements also provides for the inherent benefit of improved response during underfrequency events as there is a reduction in the rate at which system frequency declines. Having fewer units online would result in a faster rate of decline of system frequency. A faster rate of decline of frequency, coupled with slower responding machines, can have the effect of shedding more blocks of customers during underfrequency events. Hydro notes that gas turbines are the fastest to respond to system needs, followed by the Holyrood units, and finally the hydraulic units.