Q. **Re: Page 24, Table 1**

For the upcoming 2018/19 winter season please provide the reserve margin, EUE, expected customer outage hours, and LOLH assuming that the DAFOR for the Bay d'Espoir hydraulic units is 10%, 15% and 20% using the Conservative Supply Case with Load Sensitivity I (similar format to Table 9 on Page 38).

A. Hydro's Near-Term Generation Adequacy Report assumed a Derated Adjusted Forced Outage Rate (DAFOR) of 3.85% for the Bay d'Espoir hydraulic units. In both 2016 and 2017, Hydro experienced outages of significant duration to hydraulic units at Bay d'Espoir, associated with outages to Bay d'Espoir Penstocks 1 and 2. The associated full year DAFOR results for 2016 and 2017 and the assumption used in Hydro's Near-Term Generation Adequacy Report for Bay d'Espoir are presented in Table 1. The DAFOR assumption of 3.85% is lower than Hydro's 2016 experience, reflecting the progress made to date in increasing penstock reliability, but higher than Hydro's 2017 experience to ensure Hydro remains conservative in its assessment.

Table 1: 2016-2017 DAFOR Results and Assumption

Year	Bay d'Espoir Plant DAFOR
2016 Actual	4.06%
2017 Actual	3.59%
Near-Term Generation Adequacy Assumption	3.85%

Based on the above, Hydro considers plant DAFORs of 10%, 15%, and 20% to be extremely unlikely; however, to fully respond to the question as asked, the analysis

in the report was repeated using Sensitivity Load Projection I and the conservative supply case with the Bay d'Espoir forced outage rate set at 10%, 15%, and 20%. The results of the analysis can be found in the following Tables 2, 3, and 4.

Table 2: Bay d'Espoir Forced Outage Rate 10%

Summary of Results P90 Analysis				
Year	**2019**	**2020**	**2021**	**2022**
HRD DAFOR	**Expected Unserved Energy (MWh)**			
15%	192	192	184	184
18%	279	280	268	268
20%	349	350	335	335
	Expected Customer Outage Hours			
15%	31,900	32,000	30,600	30,600
18%	46,500	46,600	44,600	44,600
20%	58,100	58,300	55,800	55,800
	Loss of Load Hours (LOLH)			
15%	3.01	3.02	2.90	2.90
18%	4.26	4.28	4.10	4.10
20%	5.25	5.27	5.05	5.05

Table 3: Bay d'Espoir Forced Outage Rate 15%

Summary of Results P90 Analysis				
Year	**2019**	**2020**	**2021**	**2022**
HRD DAFOR	**Expected Unserved Energy (MWh)**			
15%	396	398	381	381
18%	560	563	539	539
20%	690	692	664	664
	Expected Customer Outage Hours			
15%	66,000	66,300	63,500	63,500
18%	93,400	93,800	89,900	89,900
20%	114,900	115,400	110,600	110,600
	Loss of Load Hours (LOLH)			
15%	5.79	5.81	5.58	5.58
18%	7.94	7.98	7.66	7.65
20%	9.59	9.64	9.26	9.26

Table 4: Bay d'Espoir Forced Outage Rate 20%

Summary of Results P90 Analysis				
Year	**2019**	**2020**	**2021**	**2022**
HRD DAFOR	**Expected Unserved Energy (MWh)**			
15%	725	728	698	698
18%	1,002	1,007	966	966
20%	1,217	1,223	1,174	1,174
	Expected Customer Outage Hours			
15%	120,900	121,400	116,400	116,400
18%	167,100	167,800	161,000	161,000
20%	202,900	203,900	195,700	195,600
	Loss of Load Hours (LOLH)			
15%	9.97	10.03	9.63	9.63
18%	13.34	13.42	12.90	12.89
20%	15.90	15.99	15.37	15.37