Q. Please provide a description of the SYSSIM hydrologic model used by Hydro in determining the new long-term average hydraulic generation capability. Please indicate the time-step used in the model (monthly, hourly, etc.). Please provide the loads and load duration curve assumed in the model and indicate if the loads reflect system conditions prior to the closure of Abitibi-Stephenville or post-closure. If the system capability in the GRA reflects loads prior to the closure of Abitibi-Stephenville, please indicate if Hydro has done any assessment of the model to reflect load characteristics on the system post-closure.

A. SYSSIM is an integrated hydro-thermal simulation tool developed by Acres. The model simulates hydroelectric yield for a range of inflow conditions, integrating the yield into the forecast load, the thermal production constraints, and non-dispatchable generation regime. The hydrologic model portion of the SYSSIM model is based upon the Acres ARSP model.

The annual average hydroelectric capability estimate incorporated in the General Rate Application is based upon Hydro's operating load forecast for the 2007 test year, which recognizes the closure of the Abitibi-Stephenville facility. The simulation was performed on a monthly basis. The model uses a base system load duration curve, which is modified for each month of simulation to reflect impacts of monthly peak and energy on load duration curve shape. The monthly peak and energy data, also taken from the operating load forecast for the 2007 test year, is provided in the following table (in per unit quantities):

Month	P.U. Energy	P.U. Peak
Jan	0.111	1.000
Feb	0.100	0.993
Mar	0.102	0.910
Apr	0.087	0.809
May	0.075	0.726
Jun	0.065	0.650
Jul	0.065	0.559
Aug	0.064	0.538
Sep	0.065	0.587
Oct	0.075	0.721
Nov	0.088	0.831
Dec	0.104	0.979

The base load duration curve data (in per unit) used in the simulation is provided in the following table:

P.U. Load	P.U. Time
1.00	0.000
0.90	0.013
0.82	0.062
0.70	0.242
0.56	0.537
0.45	0.827
0.35	0.975
0.33	0.985
0.20	1.000
0.00	1.000