1 Q. **Reference: Regulated Activities Evidence**

2   Please provide a probabilistic distribution of variability for the 2013 hydraulic

3   production forecast based on intervals of 100 GWh. (Regulated Activities Evidence,

4   Schedule V, page 1 of 1)

5

6

7 A. A probabilistic frequency distribution of the expected hydraulic production forecast

8   is provided in Chart 1 on the following page. The figure demonstrates the variation

9   in the expected production cited in the application and is based on the range of

10   results obtained with the 61 hydrological sequences simulated in the Vista

11   modeling. The expected value (average of the 61 sequences) of the production is

12   4,533 GWh per year.

13

14   The variability in the storage adjustment required to reflect the energy value in the

15   change in storage between the beginning and ending time of the run is not

16   reflected in the data – an average value of the storage adjustment was applied to

17   each of the 54 scenarios. Similarly, an average value for the mini hydro generation

18   was used.

19

20   Summary statistics are presented in the Table 1. It should be noted that each value

21   in the series is unique, so the data points were rounded to the nearest 5 GWh to

22   allow for calculation of a mode.
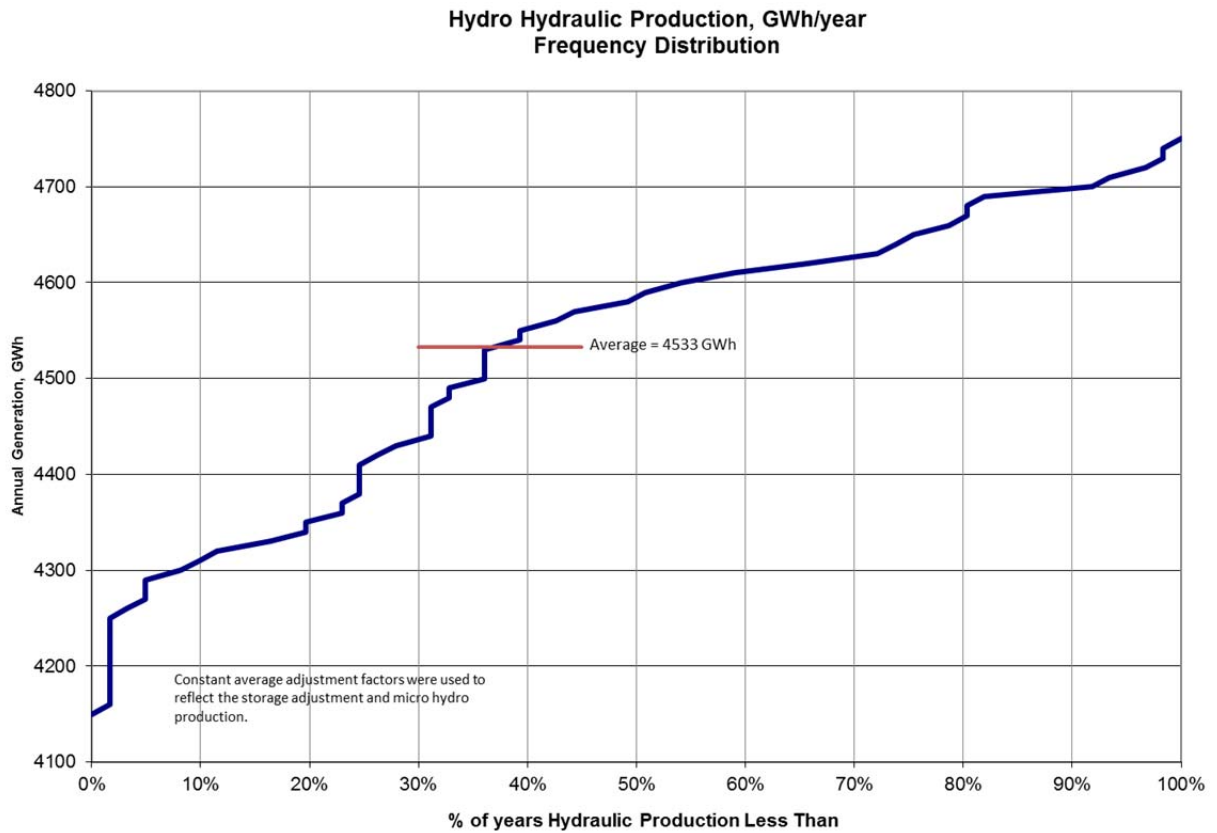
Chart 1 - Frequency Distribution

Hydro Hydraulic Production, GWh/year
Frequency Distribution

Constant average adjustment factors were used to reflect the storage adjustment and micro hydro production.

Average = 4533 GWh

Table 1 - Statistics

% data points greater than average	64%
% data points lower than average	36%
Mean	4,533
Median	4,590
Mode	4,690 (when data rounded to 5 GWh)