

UNDERTAKING J1.9

Undertaking

To provide additional information to explain the derivation of the results shown in the last two lines of chart 4 and chart 5

Response

The multi-plant unit energy costs shown in the last two lines of Chart 4 (Navigant) and the last line of Chart 5 (EUCG) on pages 18 and 19 of Ex.F1-T1-S1 are weighted averages calculated by summing the OM&A figures for the indicated plants and dividing the total by the sum of energies produced by these stations.

Tables 1 and 2 below provide additional detail regarding the calculation of the multi-plant unit energy costs from the benchmarking studies. In addition, the multi-plant unit energy costs for all the remaining study participants (i.e., all non-OPG plants together) are provided for comparison.

The results of the two benchmarking studies should not be directly compared to each other since the calculation methodologies are different. OPG provides OM&A and energy data according to the different requirements of each study. The major difference in methodology is that Navigant utilizes “regional wage adjustments” intended to levelize impacts from regional differences in labour costs. Another minor difference is that the Navigant study uses net energy while EUCG uses gross energy.

Finally, to clarify, the quartile rankings for individual stations versus the aggregate of the regulated hydroelectric stations are different due to two main factors. The first factor is the relative sizes of the stations. Sir Adam Beck II and R.H. Saunders dominate the unit energy cost calculations for the aggregated stations. The second factor is the peer groups. The individual stations have been ranked against quartiles determined from their individual peer groups of similar sized stations, while the aggregate facilities have been ranked against quartiles determined from all stations participating in each of the benchmarking studies.

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Table 1 - Navigant - Details of 2008 OM&A Unit Energy Costs (Chart 4)			
Station	OM&A (US\$M)	Energy (TWh)	OM&A US\$/MWh
5 OPG regulated hydroelectric stations (excludes SAB PGS)	55.6	19.9	2.8*
All 6 OPG regulated hydroelectric stations	65.8	20.0	3.3
All other study participants excluding all OPG plants. (184 non-OPG plants)	1,207	303	4.0

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*This figure is corrected from that shown in Chart 5. In preparation of the evidence, the six station figure of 3.3 US\$/MWh had been inadvertently entered as the five station unit energy cost in Chart 5 in Ex.F1-T1-S1 on page 18.

Table 2 - EUCG - Details of 2008 OM&A Unit Energy Costs (Chart 5)			
Station	OM&A (US\$M)	Energy (TWh)	OM&A US\$/MWh
5 OPG regulated hydroelectric stations (excludes DeCew Falls I)	73.6	19.9	3.7
All other study participants excluding all OPG plants (211 non-OPG plants)	1,163	128.2	9.1

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