

**PUB-LAB-002:** Reference Philip Raphals Export Report, Finding #27, page 61.

It is stated that "Hydro proposes to credit the new consumer for any reduction in the cost of expected unserved energy ("EUE") that would result from the transmission advancements required to serve the new load (up to the 50% maximum). EUE is calculated based on expected unavailability rate, and it is valued based on the average realized price for exports." Page 6, lines 26-28, of Hydro's Labrador Interconnected System Network Additions Policy-Summary Report it is stated that "For the purposes of Network Additions Policy analysis, EUE is valued using the approximate cost of backup generation based on the projected costs of gas turbine fuel." Please reconcile what appears to be a discrepancy.

**RESPONSE:**

Mr. Raphals states:

The referenced passage from my report was based on IOC-NLH-037:

Q. Please provide the determination or the assumption used by NLH to determine the value of the reduction of power losses and additional exports to the Island and external markets over the life of the asset. Is it always the amount of 35 \$CAD/MWh mentioned in Appendix B, page 12, line 17 regardless of time and duration?

A. The assumption used to determine the value of the reduction of power losses and additional exports was based on average realized prices for exports. The value of \$35 per MWh is an approximation of the average realized export prices for the period ranging from January 2017 to September 2018. It is also representative of the 5-year historic average (\$35 per MWh). No escalation was assumed for export prices for the 25-year study period.

While the passage cited in the question suggests that the value used for estimated EUE is different from the one used for valuing the reduction of power losses and additional exports to the Island, the spreadsheet provided as IOC-NLH-032 Attachment 1 indicates that, for the calculation of EUE, the value of energy is the same \$35/MWh without escalation.<sup>4</sup>

As it is unlikely that the fuel cost for backup generation would remain fixed year after year, it seems reasonable to conclude that Hydro is in fact using the value based on realized export price for determining EUE.

As noted in my report, it would only be logical to value EUE based on the cost of backup

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<sup>4</sup> Tab "EUE", Cell 5 (Cost of Energy = \$0.035/kWh); tab "Alt 1", cells K339:K363 shows that this is without escalation.

generation if that backup generation were in fact used to supply energy during transmission outages. It is my understanding that, instead, unserved energy generally remains unserved. Its value thus can only properly be estimated by determining the (in some cases subjective) value to consumers of improved reliability. To the best of my knowledge, no such studies of “willingness to pay” have been undertaken in Labrador.