

**Q. ENERGY SUPPLY**

**PUB 38.0 (RE: B- 10, Hydro Plants Facility Rehabilitation, Volume II, Energy Supply, Appendix I)**

**PUB 38.1**

**Further to the Board's direction in P.U. 35 (2003), p. 11, confirm that the "normal production" figures provided for each plant are the "average annual actual hydro production" for each facility.**

- A. The "normal" production figures provided for the Company's hydro plants in Volume II, Energy Supply, Appendix 1 are not the "average annual actual" production values for the plants. Attachment A to this response provides a comparison of normal production against 10 year historic average, maximum and minimum production by plant.

"Normal" production is the hydroelectric energy that would be produced in an average water year based on the current dam storage capability and current plant efficiencies. Estimates for normal production are based on results of computer models, which simulate anticipated watershed inflows based on actual historical records, and incorporate the characteristics of the existing plant infrastructure, such as dam storage and plant efficiencies. The model results are further adjusted to account for station service and practicalities of operation. The "normal" production figure is a forward-looking estimate of plant production. Newfoundland Power's current hydroelectric normal production estimates are based on the comprehensive *Water Management Study* conducted by Acres International in December 2000 and filed with the Board.

"Average annual actual" production, by contrast, is the mathematical average of the historical year-by-year production of a generating facility. The production for each year reflects the water flows experienced in that year and the characteristics of the plant infrastructure, such as dam storage capability and plant efficiencies, as existed in that year.

Order No. P.U. 35 (2003) contains no specific direction that Newfoundland Power's capital budget submissions present the average annual actual hydro production figures for its hydro plants. Rather, the Board indicated that this issue may be explored more fully at the proposed technical conference to consider issues of process and filing requirements for capital budget applications. This issue has not yet been raised in any conference at which Newfoundland Power has participated.

In Newfoundland Power's view, the estimates of "normal" hydroelectric production are the most valid indicators of the expected generation capabilities of its hydroelectric facilities. Newfoundland Power does not believe that historical production records are necessarily an appropriate indicator of the current or future generation capability of a facility. However, Newfoundland Power is open to discussing the issue at a technical conference.

<b>Newfoundland Power Inc</b> <b>Hydro Production Statistics</b> <b>(MWh)</b>				
<b>Hydro Electric</b> <b>Generating Plant</b>	<b>Normal</b> <b>Production</b> <b>Levels</b>	<b>Ten Year Statistics</b>		
		<b>Average</b> <b>Annual</b> <b>Production</b>	<b>Maximum</b> <b>Annual</b> <b>Generation</b>	<b>Minimum</b> <b>Annual</b> <b>Production</b>
Petty Harbour	15,900	14,814	17,348	10,147
Pierres Brook	25,300	24,170	28,171	20,915
Tors Cove	26,300	24,740	27,600	21,607
Rocky Pond	14,100	13,218	15,268	9,754
Mobile	41,800	40,635	45,272	35,785
Cape Broyle	34,200	32,365	39,985	25,876
Horse Chops	43,700	38,925	51,532	26,108
Topsail	14,200	12,385	16,194	8,749
Seal Cove	8,800	8,697	10,407	5,197
Hearts Content	8,200	9,147	10,214	7,726
Victoria	3,000	3,018	3,635	2,613
New Chelsea	15,400	15,733	17,821	12,883
Pittmans Pond	3,000	2,885	3,343	2,266
Morris	7,200	6,321	7,864	4,445
West Brook	2,800	2,713	3,326	1,647
Fall Pond	1,000	991	1,213	811
Lawn	2,600	2,444	2,810	1,253
Rattling Brook	69,400	68,727	83,330	50,493
Sandy Brook	28,500	27,587	31,801	13,101
Lockston	8,400	8,099	9,342	6,200
Port Union	2,300	2,232	2,524	1,773
Lookout Brook	29,500	31,707	41,094	22,323
Rose Blanche Brook <sup>1</sup>	20,500	23,304	28,257	17,100
<b>Totals</b>	<b>426,100</b>	<b>414,857</b>		

<sup>1</sup> Average Annual Production for Rose Blanche Brook based on 1999 - 2003. Rose Blanche Brook Plant was fully commissioned in 1998.