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**2008 Long Term Acquisition Plan**

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**APPENDIX L3**

**Site C Unit Energy Cost and  
Recent Orders in Council**

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### Site C Unit Energy Cost and Recent Orders in Council

BC Hydro examined the effect of the following Orders in Council (**OIC**) on the scenario "C" Site C Unit Energy Cost (**UEC**) estimate set out in Table 3-19 of the 2008 Long-Term Acquisition Plan (**LTAP**):

- OIC No. 787 (effective 1 January 2008), which creates a third tier of water rental rates for energy production above 3000 GWh/year. The third tier of water rental rates would apply to Site C should the project proceed. The water rental rate is \$6.196/MWh, as compared to the water rental rate of \$5.153/MWh applicable to Site C prior to OIC No. 787. A copy of OIC No. 787 is attached to this Appendix.
- OIC Nos. 27 and 28, which address the deemed debt-to-equity ratio for BC Hydro. Prior to the OICs, BC Hydro had been directed by the British Columbia Utilities Commission to assume projects would be financed with 100 per cent debt. However, due to the large potential investment required for Site C, the UECs provided in the Site C Stage 1 Report and Table 3-19 of the 2008 LTAP assumed an 80/20 debt/equity ratio when determining the project discount rate. The implication of the OICs is the utilization of a 70/30 debt equity ratio to calculate the discount rate for project evaluation. Copies of these two OICs are attached as Appendix B4 to the 2008 LTAP, and are further described in section 1.2.3 of the 2008 LTAP.

For Site C, the change from an 80/20 debt/equity ratio to a 70/30 debt/equity ratio on its own would have produced an increase in the UEC. However, there have been unrelated decreases in both the cost of debt and the cost of equity for BC Hydro since May 2007, the date of the interim project cost estimate in the Site C Stage 1 Report was prepared, which in turn was used to generate Table 3-19. The table below shows the changes to the factors making up the Site C discount rate, comparing the assumptions used in the Stage 1 Report to the assumptions that would be used today. In both cases, the effective nominal discount rate for Site C would be 8 per cent. This means OIC Nos. 27 and 28, combined with changes in financing costs, have no material effect on the Site C UEC.

The table below shows the overall effect of the OICs described above on the UEC for Site C. Due to the lack of change in the project discount rate, the difference in UEC is entirely attributable to the change in water rental rate.

**Changes to Site C UEC Assumptions**

	Stage 1 Report and Table 3-19 (May 2007)	Update (July 2008)	Units
Cost of Equity	13.51%	11.78%	
Cost of Debt	6.88%	6.00%	
Deemed Equity	20%	30%	
Implied Debt	80%	70%	
Project Discount Rate	8.21%	7.73%	
Rounded Discount Rate	8%	8%	
Water Rental rate	5.153	6.196	\$/MWh
UEC – 2008 LTAP, Table 3-19, scenario “C” (\$450 million risk reserve)	66.82	68.02	2008\$/MWh

APPENDIX L3 to BC Hydro's 2008 LTAP  
**PROVINCE OF BRITISH COLUMBIA**

**ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL**

Order in Council No. **787**, Approved and Ordered **NOV 22 2007**

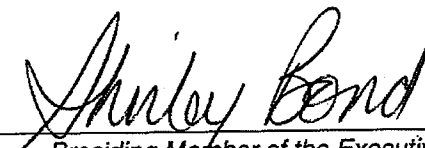
  
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 Lieutenant Governor

**Executive Council Chambers, Victoria**

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that, effective January 1, 2008, the Water Regulation, B.C. Reg. 204/88, is amended in Schedule A, Part 3, Item 11.1 by repealing item (b) and substituting the following:

Item	Column 1	Column 2 \$
(b)	General power use:	
	construction capacity, for each kilowatt	0.345 indexed
	authorized capacity, other than construction capacity, for each kilowatt	3.453 indexed
	output, for each megawatt-hour a year, up to a total of 160 000 megawatt-hours from all power developments operated by the same licensee	1.036 indexed
	output, for each additional megawatt-hour a year exceeding 160 000 megawatt-hours, up to a total of 3 000 000 megawatt-hours	4.835 indexed
	output, for each additional megawatt-hour a year exceeding 3 000 000 megawatt-hours	5.815 indexed
	minimum annual rental, for each licence	200.00

  
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 Minister of Environment and Minister Responsible for  
 Water Stewardship and Sustainable Communities

  
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 Presiding Member of the Executive Council

*(This part is for administrative purposes only and is not part of the Order.)*

**Authority under which Order is made:**  
 Act and section:- Water Act, R.S.B.C. 1996, c. 483, s. 100 (1)

Other (specify):- oic 889/88

November 2, 2007

R/1084/2007/22