

1 Q. **Unit 1 Stack Breeching:** With reference to section 4.3, page 20 of the July 2011
 2 Hydro report, what is the "slightly less initial capital cost" of Alternatives 3 and 7 as
 3 compared to the initial capital cost of Hydro's proposed least cost alternative
 4 (\$1,853,900)? What are the components of the initial capital cost for Alternatives 3
 5 and 7, broken down by description and respective cost?

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8 A. Table 1 below summarizes the key differences in work scope associated with
 9 Alternatives 2, 3 and 7.

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Table 1: Scope for Selected Alternatives

Description	Alternative 2	Alternative 3	Alternative 7
Replace internal insulating liner		X	X
Replace expansion joints	X	X	X
Replace limited amount of steel casing with a similar grade material	X	X	X
Replace West support structures	X	X	X
Replace East support structures	X	X	
Refurbish East support structures			X
Partially remove the internal insulating liner	X		
Install external insulation system	X		
Install ice protection shield	X		

11 As can be seen in Table 1, the primary difference in scope between the preferred
 12 alternative (Alternative 2) and the others relates to the issue of internal versus
 13 external insulation. The initial project cost required to construct Alternative 2 is
 14 greater than the initial project cost to construct either Alternative 3 or 7 because of
 15 the additional cost to install an external insulation system and ice protection shield.
 16 The components of the initial capital cost for Alternatives 3 and 7, broken down by
 17 description and respective cost, are summarized in the table below. Note that the

Holyrood (HTGS) Stack Breeching and Fuel Tank Refurbishment

- 1 contract prices for Alternatives 3 and 7 were received from Alstom as lump sum
- 2 prices and were not broken down by description and relative cost.

Alternative	Project Task Description	Cost (\$)	Total Difference from Alternative 2
3	Labour (Internal Hydro engineering, operations, and project management labour):	114,400	
	Contract (Labour & Materials): Restore breeching casing with patch plates, restore the internal insulating liner, replace the expansion joints near the stack, replace the support structures, and coat the breeching exterior as required.	1,379,200	
	Travel	2,000	
	Other (Overheads, , AFUDC, Escalation, Contingency)	273,300	
	Total	1,768,900	(85,000)
7	Labour (Internal Hydro engineering, operations, and project management labour):	114,400	
	Contract (Labour & Materials): Restore breeching casing with patch plates, restore the internal insulating liner, replace the expansion joints near the stack, replace the West support structure and refurbish the East support structure, and coat the breeching exterior as required.	1,399,628	
	Travel	2,000	
	Other (Overheads, , AFUDC, Escalation, Contingency)	276,172	
	Total	1,792,200	(61,700)