

1 Q. **C-113, Replace Insulators, \$411,600**

2 Please provide details of how Hydro calculates the annual budget for the
3 replacement of insulators.

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6 A. In 2005, Hydro completed a survey of its stations and identified the stations that
7 contained insulators known to have cement growth problems. From this exercise, a
8 multi-year plan was developed with consideration to balance, cost, system outages
9 and resource requirements in any given year. Budgets were prepared and work
10 executed for 2006 through to 2010. The current approved plan for 2011 is being
11 completed and the details of the breakdown of estimates for 2011, 2012 and 2013
12 are outlined below.

2011			
	Number	Cost/Unit	Total Installed Cost
230 kV Suspension String	85	\$ 900.00	\$ 76,500.00
138 kV Suspension String	32	\$ 780.00	\$ 24,960.00
69 kV Suspension String	0	\$ 660.00	\$ -
230 kV Station Post	105	\$ 1,300.00	\$ 136,500.00
138 kV Station Post	79	\$ 830.00	\$ 65,570.00
69 kV Station Post	45	\$ 710.00	\$ 31,950.00
		Subtotal	\$ 335,480.00
		Interest and Escalation	\$ 32,200.00
		Contingency	\$ 33,600.00
		Total	\$ 401,280.00

2012			
	Number	Cost/Unit	Total Installed Cost
230 kV Suspension String	84	\$ 900.00	\$ 75,600.00
138 kV Suspension String	23	\$ 780.00	\$ 17,940.00
69 kV Suspension String	44	\$ 660.00	\$ 29,040.00
230 kV Station Post	105	\$ 1,300.00	\$ 136,500.00
138 kV Station Post	81	\$ 830.00	\$ 67,230.00
69 kV Station Post	44	\$ 710.00	\$ 31,240.00
		Sub Total	\$ 357,550.00
		Interest and Escalation	\$ 18,300.00
		Contingency	\$ 35,800.00
		Total	\$ 411,650.00

2013			
	Number	Cost/Unit	Total Installed Cost
230 kV Suspension String	90	\$ 900.00	\$ 81,000.00
138 kV Suspension String	35	\$ 780.00	\$ 27,300.00
69 kV Suspension String	37	\$ 660.00	\$ 24,420.00
230 kV Station Post	110	\$ 1,300.00	\$ 143,000.00
138 kV Station Post	85	\$ 830.00	\$ 70,550.00
69 kV Station Post	46	\$ 710.00	\$ 32,660.00
			\$ 378,930.00
		Interest and Escalation	\$ 28,500.00
		Contingency	\$ 33,400.00
		Total	\$ 440,830.00

- 1 It is important to note that the budget presented for 2013 is different than that
- 2 presented in the five year summary due to a further refinement of the 2013 plan.

1 Further adjustments will also be required on this proposal after a detailed review is
2 completed of the 2011 planned activities, and the updated proposal will then be
3 included with the 2013 capital submission.