

1 Q. The 2004 Capital Budget (B-12) included the replacement of Unit 2 Exciter at
2 Cat Arm, a project which was not approved in Board Order P.U 29(2003).
3 Please provide an update on the service record of this static exciter since the
4 2004 Capital Budget Application and the current plan for maintaining this
5 piece of equipment.

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8 A. Since the 2004 Capital Budget Application, the following cards have been
9 replaced due to failures. These cards were replaced either from inventory or
10 from the exciter removed from Unit 1.

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- 12 (a) 1 – AC/DC Power Supply
- 13 (b) 1 – Intermediate Pulse Stage Card
- 14 (c) 2 – Conduction Monitoring Cards

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16 These cards were replaced due to incidents that occurred on August 1,
17 August 15 and August 22, 2004. This resulted in forced outages of the unit,
18 which fortunately did not, in those instances, result in underfrequency
19 loadshedding. Under other system conditions (eg. unit or system loading)
20 this would have likely led to underfrequency loadshedding and thus customer
21 interruption.

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23 The present status of spares for these cards is:

Card	No. in Service in Unit 2	No. in Inventory	No. in Unit 1 Exciter
(a) AC/DC Power Supply	2	0	2
(b) Int. Pulse Stage Card	1	0	0
(c) Conduction Mon. Card	3	0	2

1 The original exciter on Unit 1 was replaced in 2002. The old exciter has
2 been kept on site to be used for spares. The Intermediate Pulse Stage card
3 presently in service in Unit # 2 was taken from Unit # 1 after an incident on
4 August 1, 2004. The card removed from Unit 2 after the August 1, 2004
5 incident remains suspect and since it cannot be tested either by the
6 manufacturer or Hydro, it cannot be considered reliable for service.

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8 The manufacturer (ABB) was contacted in September 2004 concerning the
9 availability of replacement cards. ABB confirmed that they do not have any
10 spares available, they cannot manufacture new cards and there are no third
11 party manufacturers to fabricate the cards. Also, they do not have the
12 facilities to test the cards that we have removed.

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14 Due to these recent failures, a report is currently being prepared detailing the
15 status of all spare cards, the cost to replace the exciter, the cost of operating
16 other units and the cost of spilling water if the unit is out of service for an
17 extended period due to the unavailability of replacement cards after a failure.

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19 When this review is completed, Hydro may need to seek approval to replace
20 the exciter as early as 2005 to ensure that customers' power and energy
21 requirements can be reliably met.