

1 Q. For the budget item identified below, provide the following information:

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3	Budget Item	Amount	Description
4	B-69	\$8,942,000	Complete Microwave Radio System Interconnection

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6 (a) Aliant Telecom has a looped digital fibre system in existence along the
7 same path. Compare the cost and benefit of using the Aliant system
8 with the proposed microwave system.

9 (b) Provide details on the projected annual cost of operating and
10 maintaining this microwave system.

11 (c) Provide details on the reliability (availability in % per year) that Hydro
12 has experienced on its existing microwave systems on the island.

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15 A. (a) Refer to response to NP-180, letter to Mr. Geoff Emberley dated
16 March 07, 2001.

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18 Generating and transmission utilities like NLH have traditionally, and
19 still continue to, utilize privately owned telecommunication facilities
20 that are essential to maintaining the appropriate level of security and
21 reliability of mission critical services.

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23 Therefore the outsourcing of mission critical teleprotection services
24 was not considered by Hydro and as such an evaluation of the Aliant
25 infrastructure was not undertaken.

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27 In 2000, Hydro undertook a survey of the major generating and
28 transmission utilities in Canada to obtain information and trends on the

1 technologies used to support mission critical applications. The second
2 component was to determine if there was a trend by the major utilities
3 to move towards a leased or out-sourced telecom service rather than
4 the traditional owned telecom solution.

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6 The results of the survey concluded:

- 7 1. Technologies used to support teleprotection and SCADA
8 applications are primarily utility owned fibre optic cable and
9 microwave radio.
- 10 2. All utilities have plans to install new privately owned
11 infrastructure to support teleprotection and SCADA circuits.
- 12 3. Utilities surveyed do not use leased telecom facilities to support
13 critical teleprotection or SCADA circuits.

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15 Hydro is a member of the Canadian Electricity Association (CEA)
16 Telecom Task Group and the consensus of this group favors an
17 owned rather than leased philosophy as well.

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19 (b) The estimated annual operating expense would be approximately
20 \$60,000 per year. This covers diesel fuel and nitrogen, road
21 maintenance and electricity.

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23 (c) Hydro has experienced extremely high availability on its existing
24 microwave radio system. End to end circuit availability was designed
25 and has been consistently measured to be better than 99.9999%.
26 This high degree of availability is an absolute requirement for
27 teleprotection of transmission lines and is consistent with utility design
28 practices.