

1 Q. The system identified below was purchased in 1989 and manufacturer
2 support terminated in 1991. Answer the following questions or provide the
3 information as appropriate:
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Budget Item	Amount	Description
B-66	\$8,373,000	Replace VHF Mobile Radio System

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8 (a) Provide a copy of the cost benefit analysis conducted, if any, when
9 purchasing the existing system.

10 (b) Provide details on the impact of deferring the purchase of this item
11 one, two or five years.

12 (c) Can components of the system be replaced to defer the need for the
13 bulk of the capital expenditure to a future time? If not, why not? If so,
14 provide details on the cost of replacing components.

15 (d) Other communication service providers offer cell phones, paging and
16 VHF/UHF/twisted pair/microwave/fibre services. Can the purchase of
17 communications services from others help defer or lower the cost of
18 providing these services? Has Hydro considered using such
19 services?
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21
22 A. (a) A cost benefit analysis was not completed at the time of purchase in
23 1989.
24

25 (b) Deferring the purchase of this item could jeopardize the Corporation's
26 ability to provide VHF mobile radio service required to ensure the
27 safety of personnel and efficient operation of the power system. A
28 reasonable life expectancy for a system of this nature is 10-12 years.

1 The manufacturer has not supported the system for over ten (10)
2 years, refer to NP-98 item B-66 for additional information. Any failure
3 of a major component of the system would render some or all of the
4 system inoperable. Due to the highly specialized nature of mobile
5 radio systems, if a failure were to render the system inoperable, an
6 emergency replacement of the system would take 12-18 months
7 including the design, procurement, installation and training for the
8 replacement system. By proactively replacing the system before a
9 serious outage has occurred the Corporation is ensuring that the
10 integrity of its mobile communications system is maintained.

11
12 (c) There are several equipment replacement options. In summary, the
13 switch and site controllers have to be replaced. Depending on the
14 technology selected, the mobile radios and portable radios may be re-
15 useable. However, the radios would require ongoing replacement as
16 the majority will be fifteen (15) years old by 2003 and are beginning to
17 reach the end of their useful life. This would decrease the overall
18 reliability of the system and increase maintenance costs. As well, the
19 replacement as planned includes the provision of repeaters to provide
20 improved system coverage in selected areas. It is felt that replacing
21 the system piecemeal maybe a less than optimal solution. In 2002 the
22 repeater equipment will be fourteen (14) years old and this is the only
23 portion of the system that maybe able to be retained apart from the
24 radios. This is still being assessed by the repeater manufacturer,
25 Motorola.

26
27 (d) Hydro has spent a significant amount of time with Aliant over the past
28 three (3) years in assessing the viability of a province wide VHF
29 mobile radio infrastructure. The current trend points to a continuation

1 of large users such as NP, Coast Guard, RCMP and RNC operating
2 their own infrastructure.

3

4 There are no service providers for mobile services in many areas of
5 the province where the Corporation requires these services. Cellular
6 telephone, while available in a large proportion of the Island, does not
7 provide the features or coverage of a mobile radio, infrastructure.

8 Paging is primarily limited to urban areas.

9

10 Hydro, working with a satellite services provider, explored interfacing
11 VHF mobile radio equipment with portable satellite systems.

12 However, the systems could not be interfaced properly. Hydro has
13 purchased portable satellite phones to provide services in remote
14 areas. The functionality and per unit air time costs do not make the
15 satellite alternative viable. Satellite services have traditionally been
16 used to fill very specific and limited needs in the remote
17 communication field.