

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

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

6

7 (a) Provide the survey noted in response to NP-118.

8

9 (b) Is Hydro aware of any electric utilities that utilize any communications
10 facilities that are not owned by that utility and are used to support tele-
11 protection or SCADA circuits. Provide all instances.

12

13 (c) Provide a forecast of annual labour components of operating and
14 maintaining the microwave system for the period 2002 to 2006.

15

16 (d) Provide all instances where any microwave channel was not available
17 over the past five years, when the outage occurred, the time it was not
18 available and the nature of the failure.

19

20

21 A. (a) Attached is a copy of the survey results as noted in response to
22 NP-118.

23

24 (b) The survey undertaken by Hydro was of electric utilities with a similar
25 mandate to that of Newfoundland and Labrador Hydro, that being a
26 bulk generation and transmission utility. The only instance noted
27 where teleprotection services are provided by a leased carrier circuit
28 was by B.C. Hydro, and that was only where there was no other

1 practical alternative. Also both New Brunswick Power and Manitoba
2 Hydro will use leased common carrier circuits for backup
3 teleprotection, the main teleprotection circuits are on utility owned
4 facilities.

5
6 All utilities with the following exception use leased common carrier
7 circuits for SCADA purposes:

- 8
9 - Saskatchewan Power for city distribution only;
10 - B.C. Hydro when there is no practical alternative.

11
12 (c) There is no forecast of annual labour component of operating and
13 maintaining the microwave system for the period 2002 to 2006.
14 Based on our experience, as this infrastructure will be new, the
15 incremental labour component for the four (4) sites is considered
16 minimal.

17
18 (d) Since Hydro's West Coast Microwave infrastructure was replaced in
19 1999, there has been no time (i.e. circuit availability was 99.9999% or
20 better) that a circuit has been unavailable.

UTILITY TELECOMMUNICATIONS SURVEY
JANUARY 2001

Technology	Utility	Number of Links		Services		
		Existing	Planned	Teleprotection	SCADA	Misc.
UTILITY OWNED OPGW	NF Hydro	0	0	-	-	-
	NB Power	0	0	-	-	-
	Hydro Quebec	54	10	x	x	x
	Hydro One	30	20	x	x	x
	Sask. Power	2	0	x	x	x
	Manitoba Hydro	4	0	x	x	x
	Atco. Electric	2	0	x	-	-
	BC Hydro	0	0	-	-	-
UTILITY OWNED FIBER	NF Hydro	5	2	x	x	x
	NB Power	2	1	x	x	x
	Hydro Quebec	375	25	x	x	x
	Hydro One	20	20	x	x	x
	Sask. Power	40	2	x	x	x
	Manitoba Hydro	25	0	x	x	x
	Atco. Electric	0	0	-	-	-
	BC Hydro	8	6	-	-	-
UTILITY OWNED ASYNCHRONOUS MICROWAVE RADIO	NF Hydro	11	9	x	x	x
	NB Power	2	0	x	x	x
	Hydro Quebec	30	41	x	x	x
	Hydro One	4	1	x	x	x
	Sask. Power	0	0	-	-	-
	Manitoba Hydro	60	0	x	x	x
	Atco. Electric	45	3	x	x	x
	BC Hydro	8	0	-	-	-
UTILITY OWNED SONET MICROWAVE RADIO	NF Hydro	4	8	x	x	x
	NB Power	16	15	x	x	x
	Hydro Quebec	11	87	x	x	x
	Hydro One	4	16	x	x	x
	Sask. Power	0	0	-	-	-
	Manitoba Hydro	4	0	x	x	x
	Atco. Electric	0	0	-	-	-
	BC Hydro	40	50	-	-	-
UTILITY OWNED MISC. RADIO UHF, VHF & SPREAD SPECTRUM	NF Hydro	7	1	x	x	x
	NB Power	many	0	-	x	x
	Hydro Quebec	25	0	-	x	x
	Hydro One	2	0	-	x	-
	Sask. Power	4	0	-	-	x
	Manitoba Hydro	27	2	-	-	x
	Atco. Electric	30	0	-	x	x
	BC Hydro	many	0	-	-	-

Technology	Utility	Number of Links		Services		
		Existing	Planned	Teleprotection	SCADA	Misc.
LEASED/OWNED SATELLITE	NF Hydro	2	0	-	x	x
	NB Power	1	0	-	-	x
	Hydro Quebec	10	0	-	-	x
	Hydro One	70	0	-	x	x
	Sask. Power	4	0	-	x	x
	Manitoba Hydro	10	0	-	-	x
	Atco. Electric	0	0	-	-	-
	BC Hydro	15	0	-	-	x
UTILITY OWNED POWER LINK CARRIER	NF Hydro	30	4	x	x	x
	NB Power	2	0	x	x	x
	Hydro Quebec	80	0	x	x	x
	Hydro One	250	30	x	x	x
	Sask. Power	82	0	x	x	x
	Manitoba Hydro	29	2	x	x	x
	Atco. Electric	3	0	-	x	-
	BC Hydro	80	0	-	-	-
LEASED COMMON CARRIER CIRCUITS	NF Hydro	60	24	-	x	x
	NB Power	4	0	Note 1	-	-
	Hydro Quebec	900	0	-	x	x
	Hydro One	600	100	Note 2	x	x
	Sask. Power	16	0	-	Note 3	-
	Manitoba Hydro	365	0	Note 1	x	x
	Atco. Electric	6	0	-	x	x
	BC Hydro	Note 5	Note 5	Note 4	Note 4	Note 4

Legend:

OPGW Overhead Optical Ground Wire

NOTE 1: Backup teleprotection circuit, main teleprotection circuit on owned facilities

NOTE 2: Non-critical circuits only

NOTE 3: City distribution substations only

NOTE 4: Used when there is no other practical alternative

NOTE 5: No number identified, but services are used

x Yes

- No, or no response