

- 1 Q. Provide a corporate structural chart showing all subsidiaries, affiliates and
2 associates of Hydro.
3
4 A. Attached is the requested chart.

- 1 Q. Further to NP-44, provide details of any changes in annual energy production
2 capabilities since the in-service date for each of Hydro's hydraulic plants
3 shown on HGB, Schedule IX. For each change, identify the year in which it
4 was implemented.
5
- 6 A. The following table provides the annual average and firm energy production
7 capabilities from 1992 to present for Hydro's hydraulic generating plants.
8 Information prior to this period is not readily available.

Annual Energy Capability by Plant 1992-2001 (Values in GWh)							
	Year	Bay d'Espoir	Upper Salmon	Hinds Lake	Cat Arm	Paradise River	Mini Hydro
1992	<i>Average</i>	2541	541	342	745	36	7
	<i>Firm</i>	2211	418	287	620	25	5
1993	<i>Average</i>	2535	541	340	735	38	7
	<i>Firm</i>	2211	418	287	617	26	5
1994	<i>Average</i>	2535	541	340	735	38	7
	<i>Firm</i>	2211	418	287	617	26	5
1995	<i>Average</i>	2535	541	340	735	38	7
	<i>Firm</i>	2211	418	287	617	26	5
1996	<i>Average</i>	2570	543	341	742	39	7
	<i>Firm</i>	2216	420	286	613	27	5
1997	<i>Average</i>	2570	543	341	742	39	7
	<i>Firm</i>	2226	474	286	613	27	5
1998	<i>Average</i>	2587	549	339	736	39	7
	<i>Firm</i>	2234	476	283	605	27	5
1999	<i>Average</i>	2587	549	339	736	39	7
	<i>Firm</i>	2234	476	283	605	27	5
2000	<i>Average</i>	2600	552	340	737	39	7
	<i>Firm</i>	2234	476	283	605	27	5
2001	<i>Average</i>	2598	552	340	735	39	7
	<i>Firm</i>	2234	476	283	605	27	5

1

1 Average annual hydraulic production capabilities may change with the
2 addition of new hydrologic or inflow data combined with water-to-energy
3 factor experience. New hydrologic information is included in the long term
4 average water availability for each plant.

5

6 Firm hydraulic production capabilities may change as a result of changes to
7 water-to-energy conversion factors. The firm hydrologic period does not
8 normally change.

9

10 A review of annual production capabilities is made each year, however,
11 average and firm capabilities are only updated when significant differences
12 are observed.

13

14 Of note, Upper Salmon's firm energy capability changed from 420 GWh in
15 1996 to 474 GWh in 1997. This is primarily due to a change in the firm
16 definition. The new figure was based on the same firm water cycle used for
17 Bay d'Espoir.

1 Q. If Hydro had started a five-year phase out of the preferential and government
2 rates beginning January 1, 1997, what would be the impact on its deficit in
3 2002?

4
5 A. If the phase out of preferential and government rates began on January 1,
6 1997, the deficit in 2002 would be approximately \$2.6 million less than what it
7 would otherwise have been.

- 1 Q. JCR on page 8, lines 12-14 indicates that Hydro will change its approach in
2 calculating carrying charges for the RSP. Section 17(1)(b) of the *Hydro*
3 *Corporation Act* requires approval of the Board for any changes to the RSP.
4 Will Hydro be requesting the Board's approval of this change?
5
- 6 A. Yes. Hydro will be requesting the Board's approval, during the current rate
7 hearing, regarding the change in calculating carrying charges for the RSP.

- 1 Q. Provide the Hydro Island Interconnected system peaks for each month by
2 year from 1986 to 2000. Include the demand recorded, the time, and date of
3 each peak.
4
- 5 A. Please refer to the attached tables.

Newfoundland & Labrador Hydro

2001 General Rate Application

	Jan-1986	Feb-1986	Mar-1986	Apr-1986	May-1986	Jun-1986	Jul-1986	Aug-1986	Sep-1986	Oct-1986	Nov-1986	Dec-1986
HYDRO SYSTEM PEAK MW	1,017	998	1,084	890	787	747	678	709	778	769	977	1,044
HYDRO SYSTEM PEAK TIME	17:08	17:57	12:00	11:58	11:55	10:12	16:42	12:00	09:20	11:20	16:58	08:05
HYDRO SYSTEM PEAK DATE	01/16/86	02/04/86	03/10/86	04/07/86	05/13/86	06/04/86	07/29/86	08/25/86	09/29/86	10/22/86	11/14/86	12/09/86
	Jan-1987	Feb-1987	Mar-1987	Apr-1987	May-1987	Jun-1987	Jul-1987	Aug-1987	Sep-1987	Oct-1987	Nov-1987	Dec-1987
HYDRO SYSTEM PEAK MW	1,019	981	1,065	860	775	722	664	667	750	783	946	1,032
HYDRO SYSTEM PEAK TIME	09:16	08:11	08:13	11:47	09:00	09:24	11:41	11:57	09:52	11:42	10:59	12:11
HYDRO SYSTEM PEAK DATE	01/21/87	02/12/87	03/11/87	04/10/87	05/19/87	06/03/87	07/06/87	08/12/87	09/28/87	10/26/87	11/16/87	12/29/87
	Jan-1988	Feb-1988	Mar-1988	Apr-1988	May-1988	Jun-1988	Jul-1988	Aug-1988	Sep-1988	Oct-1988	Nov-1988	Dec-1988
HYDRO SYSTEM PEAK MW	1,155	1,128	960	957	945	776	682	658	774	835	1,038	1,229
HYDRO SYSTEM PEAK TIME	17:21	11:27	11:18	11:45	11:52	16:54	10:51	11:53	16:42	09:42	20:06	18:55
HYDRO SYSTEM PEAK DATE	01/15/88	02/22/88	03/06/88	04/11/88	05/03/88	06/01/88	07/15/88	08/29/88	09/29/88	10/17/88	11/23/88	12/30/88
	Jan-1989	Feb-1989	Mar-1989	Apr-1989	May-1989	Jun-1989	Jul-1989	Aug-1989	Sep-1989	Oct-1989	Nov-1989	Dec-1989
HYDRO SYSTEM PEAK MW	1,184	1,230	1,132	990	823	808	674	620	753	832	1,014	1,164
HYDRO SYSTEM PEAK TIME	17:01	17:37	08:02	11:43	09:45	11:49	11:23	11:40	12:00	10:15	16:50	17:20
HYDRO SYSTEM PEAK DATE	01/03/89	02/17/89	03/08/89	04/01/89	05/05/89	06/12/89	07/28/89	08/23/89	09/29/89	10/29/89	11/27/89	12/30/89
	Jan-1990	Feb-1990	Mar-1990	Apr-1990	May-1990	Jun-1990	Jul-1990	Aug-1990	Sep-1990	Oct-1990	Nov-1990	Dec-1990
HYDRO SYSTEM PEAK MW	1,198	1,316	1,179	941	871	759	652	650	617	834	988	1,222
HYDRO SYSTEM PEAK TIME	11:38	18:00	20:12	11:49	09:35	11:44	11:46	19:00	21:00	17:10	11:43	17:49
HYDRO SYSTEM PEAK DATE	01/20/90	02/03/90	03/08/90	04/08/90	05/24/90	06/12/90	07/05/90	08/21/90	09/04/90	10/29/90	11/28/90	12/27/90
	Jan-1991	Feb-1991	Mar-1991	Apr-1991	May-1991	Jun-1991	Jul-1991	Aug-1991	Sep-1991	Oct-1991	Nov-1991	Dec-1991
HYDRO SYSTEM PEAK MW	1,281	1,202	1,077	949	881	843	681	686	707	878	929	1,130
HYDRO SYSTEM PEAK TIME	18:52	11:47	08:34	11:49	11:47	11:44	11:15	11:37	11:07	16:49	16:52	17:04
HYDRO SYSTEM PEAK DATE	01/26/91	02/02/91	03/01/91	04/08/91	05/23/91	06/06/91	07/08/91	08/05/91	09/15/91	10/29/91	11/28/91	12/17/91
	Jan-1992	Feb-1992	Mar-1992	Apr-1992	May-1992	Jun-1992	Jul-1992	Aug-1992	Sep-1992	Oct-1992	Nov-1992	Dec-1992
HYDRO SYSTEM PEAK MW	1268	1203	1301	1044.9	880.7	738	753	665	703	840	1080	1182
HYDRO SYSTEM PEAK TIME	17:06	08:09	11:43	09:22	09:30	12:03	11:21	10:15	08:21	11:45	17:15	16:53
HYDRO SYSTEM PEAK DATE	01/27/92	02/13/92	03/02/92	04/14/92	05/06/92	06/17/92	07/04/92	08/03/92	09/25/92	10/07/92	11/21/92	12/30/92

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	Jan-1993	Feb-1993	Mar-1993	Apr-1993	May-1993	Jun-1993	Jul-1993	Aug-1993	Sep-1993	Oct-1993	Nov-1993	Dec-1993
HYDRO SYSTEM PEAK MW	1277	1288	1,162	1,031	994	847	682	672	708	949	1,142	1,169
HYDRO SYSTEM PEAK TIME	08:16	09:16	09:09	08:07	11:41	10:55	11:37	11:50	11:53	08:11	16:59	17:01
HYDRO SYSTEM PEAK DATE	01/20/93	02/08/93	03/16/93	04/01/93	05/10/93	06/13/93	07/06/93	08/30/93	09/27/93	10/27/93	11/25/93	12/30/93
	Jan-1994	Feb-1994	Mar-1994	Apr-1994	May-1994	Jun-1994	Jul-1994	Aug-1994	Sep-1994	Oct-1994	Nov-1994	Dec-1994
HYDRO SYSTEM PEAK MW	1,235	1,305	1,153	1,030	873	831	626	622	718	828	1,052	1,161
HYDRO SYSTEM PEAK TIME	17:34	11:00	07:52	10:19	11:56	12:03	11:51	11:59	19:43	12:06	17:39	17:28
HYDRO SYSTEM PEAK DATE	01/26/94	02/09/94	03/07/94	04/03/94	05/09/94	06/03/94	07/25/94	08/22/94	09/28/94	10/15/94	11/28/94	12/29/94
	Jan-1995	Feb-1995	Mar-1995	Apr-1995	May-1995	Jun-1995	Jul-1995	Aug-1995	Sep-1995	Oct-1995	Nov-1995	Dec-1995
HYDRO SYSTEM PEAK MW	1,170	1,250	1,125	1,020	858	773	726	720	751	872	1,010	1,166
HYDRO SYSTEM PEAK TIME	11:52	11:51	19:06	08:16	11:55	09:58	12:00	11:40	08:58	12:09	16:50	17:00
HYDRO SYSTEM PEAK DATE	01/13/95	02/13/95	03/06/95	04/06/95	05/08/95	06/05/95	07/17/95	08/25/95	09/25/95	10/09/95	11/29/95	12/30/95
	Jan-1996	Feb-1996	Mar-1996	Apr-1996	May-1996	Jun-1996	Jul-1996	Aug-1996	Sep-1996	Oct-1996	Nov-1996	Dec-1996
HYDRO SYSTEM PEAK MW	1,318	1,152	1,122	956	889	795	695	659	793	969	1,094	1,144
HYDRO SYSTEM PEAK TIME	16:58	17:45	08:18	09:36	11:30	11:51	16:44	12:00	19:37	17:31	16:55	12:00
HYDRO SYSTEM PEAK DATE	01/16/96	02/07/96	03/11/96	04/16/96	05/12/96	06/21/96	07/16/96	08/16/96	09/24/96	10/30/96	11/25/96	12/31/96
	Jan-1997	Feb-1997	Mar-1997	Apr-1997	May-1997	Jun-1997	Jul-1997	Aug-1997	Sep-1997	Oct-1997	Nov-1997	Dec-1997
HYDRO SYSTEM PEAK MW	1,226	1,208	1,229	1,045	899	832	720	690	733	940	1,054	1,185
HYDRO SYSTEM PEAK TIME	18:00	08:00	08:01	17:24	17:12	11:41	11:49	16:56	10:30	16:57	17:51	18:19
HYDRO SYSTEM PEAK DATE	12/31/96	02/26/97	03/10/97	04/01/97	05/26/97	06/06/97	07/15/97	08/26/97	09/28/97	10/28/97	11/18/97	12/22/97
	Jan-1998	Feb-1998	Mar-1998	Apr-1998	May-1998	Jun-1998	Jul-1998	Aug-1998	Sep-1998	Oct-1998	Nov-1998	Dec-1998
HYDRO SYSTEM PEAK MW	1,289	1,225	1,121	1,019	834	796	614	594	653	844	979	1,295
HYDRO SYSTEM PEAK TIME	17:11	09:39	11:44	12:02	09:08	16:49	11:54	11:51	20:18	17:33	17:00	17:46
HYDRO SYSTEM PEAK DATE	01/07/98	02/09/98	03/22/98	04/13/98	05/19/98	06/09/98	07/12/98	08/27/98	09/17/98	10/26/98	11/26/98	12/23/98
	Jan-1999	Feb-1999	Mar-1999	Apr-1999	May-1999	Jun-1999	Jul-1999	Aug-1999	Sep-1999	Oct-1999	Nov-1999	Dec-1999
HYDRO SYSTEM PEAK MW	1,245	1,139	1,042	1,017	837	765	702	698	763	973	1,021	1,265
HYDRO SYSTEM PEAK TIME	17:06	17:47	16:45	11:51	11:56	11:53	11:46	11:51	20:37	11:22	16:54	17:43
HYDRO SYSTEM PEAK DATE	01/02/99	02/02/99	03/16/99	04/05/99	05/03/99	06/07/99	07/12/99	08/02/99	09/27/99	10/31/99	11/24/99	12/23/99
	Jan-2000	Feb-2000	Mar-2000	Apr-2000	May-2000	Jun-2000	Jul-2000	Aug-2000	Sep-2000	Oct-2000	Nov-2000	Dec-2000
HYDRO SYSTEM PEAK MW	1,219	1,191	1,097	973	950	856	731	730	773	934	1,080	1,240
HYDRO SYSTEM PEAK TIME	17:35	19:46	11:44	11:51	16:31	16:51	12:01	11:45	16:57	11:42	16:51	17:24
HYDRO SYSTEM PEAK DATE	01/06/00	02/18/00	03/18/00	04/15/00	05/08/00	06/07/00	07/19/00	08/03/00	09/27/00	10/29/00	11/21/00	12/24/00

1 Q. Explain the 116.5 GWh increase in the forecast sales to Corner Brook Pulp
2 and Paper Company Limited for 2002.

3

4 A. The increase in forecast sales to Corner Brook Pulp and Paper Company
5 Limited in 2002 is associated with an increase in Power-On-Order as
6 anticipated by the customer. The incremental energy requirements are
7 attributed to a return-to-normal hydrology assumption for Deer Lake Power
8 Company Limited (relative to very favourable hydrology in recent years)
9 coupled with the underlying expanded newsprint production capability that
10 has also been achieved in recent years.

1 Q. Provide the details and assumptions used in the calculation of the liability for
2 employee future benefits for 2001 and 2002.

3

4 A. For years between actuarial valuations, the current service cost and interest
5 expense are projected based on the results of the most recent actuarial
6 valuation. Payments are estimated based on anticipated retirements.

7

	<u>2001</u>	<u>2002</u>
8		
9		
10		
11		
12		
13		
14		
15		
	Opening Balance	22,850,912 23,553,912
	Current Service	763,000 763,000
	Interest Expense	1,480,570 1,480,570
	Payments	<u>(1,540,570)</u> <u>(675,000)</u>
	Closing Balance	<u><u>23,553,912</u></u> <u><u>25,122,482</u></u>

1 Q. Do Hydro's current depreciation policies comply with Section 17 (1)(a) of the
2 *Hydro Corporation Act*? If not, provide details on each variance from the
3 depreciation and amortization policies of the corporation reflected in Hydro's
4 December 31, 1994 audited financial statements.

5

6 A. Hydro's current depreciation policies do comply with section 17 (1) (a) of the
7 Hydro Corporation Act.

- 1 Q. Fully describe fuel cost risk and its impact, in light of the existence of the
2 RSP, on the determination of a reasonable capital structure for Hydro on a
3 stand-alone basis (KCM, page 17, line 22).
4
- 5 A. The fuel cost risk relates to the difference between forecast and actual
6 thermal efficiency (kWh/barrel of oil). Since recovery of fuel costs is based
7 on forecast efficiency factors (e.g., the RSP does not capture differences
8 between actual and forecast efficiencies), Hydro is at risk for underrecovery
9 of actual fuel costs.

1 Q. Provide details of the higher operating risks specific to Hydro (DGH, page 9,
2 lines 18-20).

3

4 A. There are a number of areas where the Utility faces higher operating risks
5 than the Canadian peer group referred to in the referenced report.

6

7 The Utility services a wide area in Newfoundland with a low population
8 density, which exposes it to more weather related outages and higher
9 delivery costs than NP, which services the larger centres.

10

11 Unlike other utilities in its peer group, the Utility lacks a diversity of revenue
12 sources, in that it is primarily dependent upon the performance of generating
13 stations and its transmission system, and does not have access to revenues
14 from distribution to high-density urban areas. In addition, production is largely
15 dependent upon factors that cannot be controlled; i.e. water levels and
16 international oil prices. Some of the other utilities have ready access to
17 adjacent coal feedstock.

18

19 The Utility (and NP) has the only system that is not interconnected to the
20 continental grid. This limits options as they relate to purchased power in the
21 event of abnormal load requirements.

1 Q. Provide audited non-consolidated financial statements for Hydro for each
2 year for 1992 to 2000. If audited non-consolidated financial statements do
3 not exist, provide the financial statements used to prepare the consolidated
4 statements at each year-end.

5

6 A. Attached are copies of Hydro's non-consolidated financial statements for
7 each year from 1992 to 2000.

- 1 Q. What dividend amount is being used to determine the common equity ratio of
2 15.3% referenced at page 23, line 31 to page 24, lines 1-2 of KCM?
3
- 4 A. The \$70 million dividend attributable to regulated earnings is being used to
5 determine the common equity ratio of 15.3%. Please refer to JC Roberts,
6 Schedules VIII and XII.

- 1 Q. Provide any studies, surveys, reports or other evidence that supported the
2 establishment of the dividend payment policy in 1995 (WEW, Page 16. Lines
3 4-7).
4
- 5 A. Please see attached letter from Scotia McLeod dated April 24, 1995.

1 Q. Provide support for the position that Hydro's cost of debt would be more than
2 100 basis points higher in the absence of the Government guarantee (KCM,
3 page 26, lines 29-32).
4

5 A. The conclusion was based on Ms. McShane's judgement, based on her
6 analysis and knowledge of the financial parameters and debt ratings of
7 Canadian utilities, that, at the proposed financial parameters (i.e., a common
8 equity ratio of 15%, a return on equity of 3% and interest coverage of
9 approximately 1.1 times), Hydro would not be able to achieve an investment
10 grade debt rating on a stand-alone basis. "Stand-alone" in this context
11 means without any government backing or financial support from unregulated
12 operations. Investment grade is considered to include debt ratings of BBB-
13 and above. At its forecast financial parameters Hydro would be unlikely to be
14 rated higher than BB+.

15
16 The typical utility rating in Canada is A-; recent spreads between long-term
17 utility debt rated in the A category and 30-year Canadas have been close to
18 140 basis points (recently about 7.40% versus 6.0%). Hydro's long term
19 debt, which trades at yields similar to those of the Province of Newfoundland,
20 has been trading at yields about 60 basis points below the yields on A rated
21 investor-owned utility debt.

22
23 Since the market for both BBB and BB debt is relatively thin in Canada, there
24 is little empirical evidence of the spreads Hydro would encounter as a stand-
25 alone entity. However, the broader U.S. market provides an indication of the
26 size of the spreads that would be encountered by companies raising debt at
27 BBB and BB ratings. For a utility, the incremental spread between a BBB
28 rating and an A rating has averaged about 25 basis points over the past five

1 years. However, the incremental spread encountered once a company is no
2 longer investment grade is likely to be at least 75 basis points. That estimate
3 was derived by comparing spreads on BB+ and BBB industrial bonds over
4 the past five years as reported by Standard & Poor's; the average spread
5 was 82 basis points. [Standard & Poor's maintains no indices for BB+ rated
6 utility bonds] Consequently, at a BB+ rating – assuming the market were
7 receptive to an issue – Hydro would likely encounter spreads of no less than
8 100 basis points above the yields on A rated Canadian utilities, and, under
9 current market conditions, no less than 150 basis points above the yields at
10 which it can currently raise debt with the benefit of the Provincial guarantee.

1 Q. Reconcile the 2002 interest coverage of 1.08 referenced on DGH, page 12,
2 line 20 with the 2002 interest coverage of 1.10 referenced on JCR, page 7,
3 lines 6-7.

4

5 A. The 2002 interest coverage of 1.10, per JCR, includes the IOCC revenue
6 adjustment of \$2.375 million, whereas the 2002 interest coverage of 1.08
7 referenced on DGH, page 12, line 20, does not include that amount.