Q. RE: p. B-27 Replacement of Insulators - TL226 (69 kV Deer Lake - Berry Hill) ($224,000)

19.1 Of the 65 outages that were experienced in 1999, what were the causes other than defective insulators and high winds?

19.2 How many outages occurred in 2000? What were the causes?

19.3 What is the total purchase price of the 2000 insulators being replaced? What portion of the cost is labour? What other costs are involved?

A. 19.1 The 65 outages noted in p. B-22 of the 2002 Capital Budget occurred between 1990 and 1999. The causes, other than defective insulators and high winds, include overloads, under frequency load shedding, salt contamination and lightning.

19.2 There were three outages on TL 226 in 2000, two resulting from high winds and the other was a disconnect failure.

19.3 Specific costs budgeted for purchasing and installing the replacement insulators are as follows:

1	Material Supply	$70,000	
2	Labour	48,000	
3	Engineering	20,000	
4	Project Management/Environment	30,000	
5	Inspection & Commissioning	10,000	
6	Corporate O/H, IDC, Esc., Contingency	45,500	
7	Total	$223,500	

Q. RE: p.B-33 Purchase and Install Breaker Failure Protection Addition – Bottom Brook, Western Avalon & Holyrood ($229,000)

24.1 During the period from 1995 – 2000, what are the reliability statistics of the company with regard to breaker failure and the overall reliability of the system at these terminal stations?

A. 24.1 During the period 1995 – 2000 Hydro had eleven (11) breaker failures:

The following table shows the overall reliability of the system at Bottom Brook, Holyrood, and Western Avalon terminal stations.

PERFORMANCE INDICES						
Year	Bottom Brook		Holyrood		Western Avalon	
	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI
1995	0.67	2.83	4	111	4	95
1996	0.33	68.83	1	9	1	9
1997	2	64.17	1	9	3	9
1998	4.83	86.17	4	127	5	75
1999	0.67	51	0	0	0	0
2000	3.83	265.5	0	0	2	0

The Bottom Brook reliability figures are for all delivery points affected by outages to the Bottom Brook 138 kV equipment. They include outages which may not have been caused by the performance of equipment in Bottom Brook.

Q. **Re: p. B-64 Replacement of AS-400 Computers ($2,109,000)**

45.1 Provide an evaluation of the option currently being exercised, the decision to lease rather than buy the presently used AS-400 computers? Include the cost of any upgrades that have been done, as well as any additional software and the possibility that the lease could be extended, the computers could be purchased at the end of the lease, or the termination of the lease in 2002.

A. 45.1 Attached is a table showing the evaluation of the decision Hydro made to lease, rather than to purchase, the AS-400 computer. It includes upgrades and additional software and incorporates the term-end purchase price provided to Hydro at the time it entered into the lease. It shows an overall benefit in leasing this equipment of $171,298 over the lease period.

Once it had been decided to lease this computer equipment, it was prudent to lease, rather than purchase, any upgrades to be added. Each time Hydro entered into a lease for an upgrade, it arranged for the lease for the upgrade to expire on the termination date for the AS-400 lease, April 30,2002.

Please note that maintenance costs are added to the purchase costs, and not to the lease costs, because maintenance services are provided under the leases at no additional cost.

NEWFOUNDLAND AND LABRADOR HYDRO
LEASE VS PURCHASE ANALYSIS
AS400 AND RELATED SOFTWARE
DOLLARS

System	Term Commence	Purchase	Monthly Maint	NPV of Monthly Maint	Lease Payment	Lease Buyout	Effective Annual Lease Rate	NLH Borrowing Rate w 1% Guan. Fee	Lease (L) or Purchase (P)	NPV Lease Savings (To Beginning of Lease)	NPV Lease Savings (To May 97)
Initial Hardware and Software	May-97	932,017	2,502	125,819	19,211	29,175	4.43%	7.42%	L	71394	71394
Hardware and Software Upgrade	Jul-98	73,660	198	8,002	1,921	1,932	5.25%	6.99%	L	2547	2341
Hardware Upgrade	Oct-98	661,524	1,776	68,106	16,003	21,036	-1.49%	6.57%	L	99197	89636
Hardware and Software Upgrade	Jul-99	96,697	260	8,009	2,701	13,528	0.38%	7.12%	L	10376	8913
Hardware and Software Upgrade	Jan-00	4,860	13	333	187	-	0.69%	7.85%	L	408	339
Hardware and Software Upgrade	Jan-00	41,854	112	2,866	1,757	1,256	10.45%	7.85%	P	-1294	-1075
Hardware Upgrade	Mar-01	62,198	167	2,252	4,267	7,775	7.03%	6.24%	P	-326	-250
					46,047	74,702					171298

Note: NPV savings were calculated by setting implicit lease rate equal to Hydro borrowing rate for each module.