Q. Please provide a cost benefit analysis (in dollars) of the poles purchased from Aliant?

A. Please see attached documents which were filed as Schedule “C” and Exhibits 1 and 2 of Hydro’s 2002 *Ex Parte* Application for approval of the purchase of Aliant’s joint-use support structures.

Support Structures Purchase versus Lease
Financial Analysis

Introduction

Hydro's alternatives with respect to the support structures which are owned by Aliant and used jointly by Hydro and Aliant are:

1. purchase from Aliant; or
2. lease, pay attachment charges to third party.

The alternative of maintaining the status quo is not available as these assets are currently in use providing electrical service to Hydro's customers, and Aliant has made known its intention to divest itself of these assets.

Methodology

Hydro has prepared a net present value (NPV) analysis (Exhibit 1) to determine which of the two alternatives represents the least cost to its customers. The incremental cashflows were discounted using Hydro's proposed long-term weighted average cost of capital, over a 10 year timeframe, which represents the initial term of the Support Structures Purchase Agreement.

The purchase price of $3,569,840, for the 7688 support structures to be acquired represents the net book value of those assets. Hydro will receive incremental revenue from Aliant and cable television companies in respect of their attachments on these support structures as well as 11,532 support structures which Hydro currently owns.

If the agreement is not renewed at the end of the 10-year term, Aliant will be required to purchase a proportion of support structures at net book value at that time, i.e. the terminal value. Given the difficulties in forecasting beyond a 10-year timeframe, this amount is included in the analysis as a proxy for the minimum benefit that Hydro would negotiate upon renewal.

Hydro has also prepared an incremental revenue requirement (Exhibit 2) to demonstrate the impact of this transaction. The incremental changes in revenues include cable attachment fees, and rentals from Aliant that will now be paid to Hydro. On the expense side, Hydro will have additional financing charges, depreciation expense, and maintenance costs associated with ownership of these additional support structures. The result of this analysis is a projected average decrease in revenue requirement of $148,614 per year, or approximately 0.05% of the annual revenue requirement, which would tend to reduce electricity rates.

Assumptions

Inflation
The analysis assumes that costs associated with support structures will escalate at a rate of 2% per year, based on the Gross Domestic Product - Implicit Chain Price Index for Canada ("GDP-ICPI") published by Statistics Canada.

Depreciation
Hydro depreciates support structures over 30 years, so for purposes of determining the net book value and therefore the financing costs associated with the transaction, a depreciation rate of 3.33% of the original capital cost was used.

Discount Rate
Net incremental cashflows under each alternative were discounted to account for the time value of money. The discount rate used is 8.5% which represents Hydro's long-term weighted average cost of capital over a wide range of capital structures and a normal, commercial rate of return on equity, as proposed during Hydro's most recent Rate Hearing.

Operating Expenses
The analysis assumes that the incremental operating expenses associated with the support structures being purchased is $65,000 per year, consisting of vegetation control, maintenance, administration, and engineering costs, based on analysis of recent experience.

Pole Installation and Replacement
The analysis assumes that the rate of installation will be similar to recent historical experience of 2% per year. Of that number, approximately half will be replacements and half will be new installations.

Pole Installation Cost
The analysis assumes that the installation cost, which currently averages $1400 per structure, will increase by 2% per year.

Cable Attachment Revenue
The analysis assumes that cable attachment fee, which averages $5.25 per support structure in service, will increase at a rate of 1% per year and that the number of attachments will grow proportionally with the overall growth in the number of support structures.

Aliant Rental Rate
The analysis includes revenue from Aliant at escalating rental rates over the life of the 10-year agreement. The initial rental rate is $28.80, which will then be escalated based on the GDP-ICPI.

Alternative Rental Rate
The analysis assumes that Hydro would be able to attach to poles owned by a third party at a rate of $59.20 per pole. This is based on the rental charges negotiated between Aliant and Newfoundland Power Inc. in conjunction with the sale of Aliant's support structures in Newfoundland Power's service territory. In that transaction, Newfoundland Power's annual cost per joint-use pole was determined to be $98.00 for 2001, 40% of which was allocated to telecommunications and the remaining 60% to electrical use. This rate was to escalate over the life of that agreement.

Sensitivities

Sensitivity analyses was performed on certain key assumptions:

	NPV – Purchase	NPV – Lease
Base Case	$ 1,030,128	($ 387,157)
Increase maintenance to $100,000	$ 771,434	($ 387,157)
Change discount rate to 7.5%	$ 1,325,985	($ 402,667)

Conclusion

The least cost option, under a range of financial assumptions, to continue to access the support structures currently owned by Aliant and jointly used by Hydro to provide electrical service to Hydro's customers is to purchase these support structures from Aliant.

Aliant Joint-use Support Structures

Purchase versus Lease
Net Present Value of Cash Flows

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Option #1 - Purchase										
Incremental Inflows										
Cable Attachments	100,905	102,933	105,002	107,113	109,266	111,462	113,702	115,988	118,319	120,697
Aliant Rentals	553,536	570,253	587,474	605,216	617,381	640,901	653,783	666,924	680,329	694,003
	654,441	673,186	692,477	712,329	726,647	752,362	767,485	782,911	798,648	814,701
Incremental Outflows										
Installations	215,600	221,340	227,223	233,254	239,434	245,768	252,260	258,914	265,732	272,720
Maintenance	65,000	66,300	67,626	68,979	70,358	71,765	73,201	74,665	76,158	77,681
	280,600	287,640	294,849	302,232	309,792	317,534	325,461	333,578	341,890	350,401
Net incremental inflow (outflow)	373,841	385,546	397,627	410,097	416,855	434,829	442,024	449,333	456,758	464,300
Acquisition Price - Jan 1, 2002	(3,569,840)									
Terminal Value - December 31, 2011										3,962,730
NPV Purchase option	**1,030,128**									
Option #2: Lease										
Incremental Inflows										
Cable Attachments	60,543	61,760	63,001	64,268	65,559	66,877	68,221	69,593	70,991	72,418
Aliant Rentals	332,122	342,152	352,485	363,130	370,429	384,540	392,270	400,154	408,197	416,402
	392,665	403,912	415,486	427,397	435,988	451,417	460,491	469,747	479,189	488,820
Incremental Outflow										
Attachment Charge to 3rd Party	(455,128)	(464,284)	(473,637)	(483,131)	(492,829)	(502,672)	(512,726)	(522,931)	(533,353)	(543,931)
Net incremental inflow (outflow)	(62,464)	(60,372)	(58,151)	(55,733)	(56,841)	(51,255)	(52,235)	(53,184)	(54,164)	(55,111)
NPV Lease Option	**(387,157)**									

Aliant Joint-use Support Structures
Purchase versus Lease
Revenue Requirement

		2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
1	Incremental Revenues										
2	Cable Attachments	100,905	102,933	105,002	107,113	109,266	111,462	113,702	115,988	118,319	120,697
3	Aliant Rentals	553,536	570,253	587,474	605,216	617,381	640,901	653,783	666,924	680,329	694,003
4		654,441	673,186	692,477	712,329	726,647	752,362	767,485	782,911	798,648	814,701
5											
6	Incremental Expenses										
7	Financing	297,413	298,790	300,695	303,144	306,155	309,744	313,930	318,730	324,164	330,251
8	Depreciation	177,927	183,907	190,091	196,486	203,099	209,936	217,005	224,312	231,866	239,673
9	Maintenance	65,000	66,300	67,626	68,979	70,358	71,765	73,201	74,665	76,158	77,681
10		540,341	548,997	558,411	568,609	579,612	591,445	604,135	617,707	632,188	647,605
11											
12	Net incremental revenue (expense)	114,100	124,189	134,065	143,720	147,035	160,917	163,350	165,204	166,460	167,095
13											
14	10-year average	148,614									