

1 In his evidence of June 23, 2003, Mr. S. Barreca indicates on page 15 that Hydro  
2 should consider a fourth and a fifth alternative in relation to the VHF Mobile Radio  
3 System Replacement Project.

4  
5 Mr. Barreca proposed for alternative four that (1) the current switch be replaced in  
6 2004 and (2) the remaining repeaters and expanded coverage be done over 3 to 5  
7 years.

8  
9 Hydro has conducted an analysis on an alternative which (1) replaces the switch in  
10 2004; (2) expands the coverage area as required, including 6 new repeaters at  
11 already existing sites; (3) moves 6 repeaters to company-owned facilities for  
12 operating cost savings; and (4) replaces the remaining twenty-three (23) repeaters  
13 in the years 2007 to 2009.

14  
15 The results of this analysis are attached as Schedule 1 and indicates that the  
16 phased replacement is not a cost effective alternative.

17  
18 Mr. Barreca proposed for alternative five that it be identical to alternative four except  
19 that the repeater sites be moved to company-owned facilities. Hydro has only 14  
20 potential suitable sites for VHF repeater locations. Hydro has conducted an  
21 analysis, attached as Schedule 2, which moves nine (9) repeaters to suitable  
22 company-owned facilities in addition to the five (5) repeaters already existing at  
23 company-owned facilities because there is no alternative site. The remaining 21  
24 repeaters must remain at leased sites. This analysis demonstrates that it is cost  
25 effective to move to Hydro-owned sites as soon as possible to reduce operating  
26 costs.

## VHF Mobile Radio Replacement (Delayed Repeater Replacement)

Study Discount Rate: 8.50%

Schedule 1  
Page 1 of 2

Year	Trunked Radio System				Trunked Radio System (With Repeater Replacement over 5 years)				NPV Comparison (Alt. 2 - Alt. 1)  CPW to 2004
	Capital Costs	O&M Costs	Total	CPW to 2004	Capital Costs	O&M Costs	Total	CPW to 2004	
2004	3,048,000		3,048,000	3,048,000	2,393,711		2,393,711	2,393,711	\$ (654,289)
2005	5,802,000	569,250	6,371,250	8,920,120	5,802,000	569,250	6,371,250	8,265,831	\$ (654,289)
2006		569,250	569,250	9,403,672		569,250	569,250	8,749,383	\$ (654,289)
2007		569,250	569,250	9,849,343	355,973	569,250	925,223	9,473,748	\$ (375,595)
2008		569,250	569,250	10,260,099	362,516	569,250	931,766	10,146,086	\$ (114,013)
2009		569,250	569,250	10,638,676	324,492	569,250	893,742	10,740,465	\$ 101,789
2010		569,250	569,250	10,987,595		569,250	569,250	11,089,384	\$ 101,789
2011		569,250	569,250	11,309,179		569,250	569,250	11,410,969	\$ 101,789
2012		569,250	569,250	11,605,570		569,250	569,250	11,707,360	\$ 101,789
2013		569,250	569,250	11,878,742		569,250	569,250	11,980,531	\$ 101,789
2014		569,250	569,250	12,130,513		569,250	569,250	12,232,302	\$ 101,789

**Notes:**

1. Trunked Radio System estimate based on figures used in Capital Budget Proposal. (Same functionality as present system)
2. Operations and Maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier.
3. Maintenance costs for both systems are assumed to be identical.
4. 10 year life span of system assumed.
5. It is assumed that Hydro will be the sole user.

In 2004: Replace only 12 Repeaters (6 new sites and 6 to move)

6 new sites - Happy Valley, Mary's Harbour, Granite Canal, Gull Pond Hill, Notre Dame Hill, Bull Arm Hill

6 sites to move - Hawke Hill, Serrated Hills to Chapel Arm Hill, Shoal Harbour Hill, Gambo to Square Pond Hill, Red Cliff to Sandy Brook Hill, Millertown to MMH

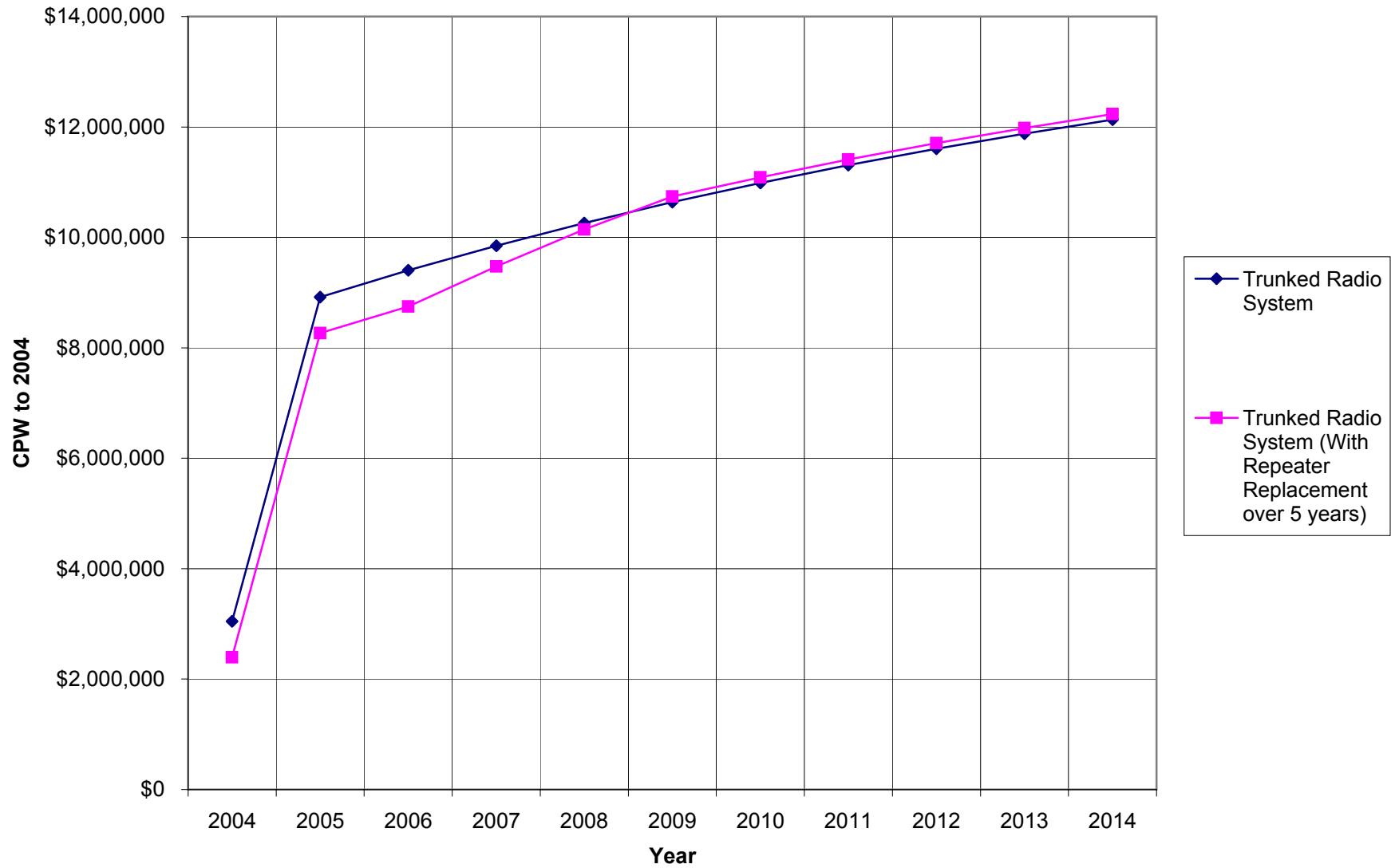
In 2006: Replace 8 Repeaters (Northern Peninsula) - St. Anthony, Blue Mountain, Southwest Brook, Mount Margaret, Port Saunders, Portland, Bonne Bay, Jackson's Arm

In 2007: Replace 8 Repeaters (West Coast) - Corner Brook, Stephenville, BGH, Annie, Codroy, Red Rocks, Rocky Ridge, Brents Cove

In 2008: Replace 7 Repeaters (Central & East) - Carmanville, Kenmount Hill, Bay L'Argent, Hermitage, GDH, BDH, Sheffield

## VHF Mobile Radio Replacement (Delayed Repeater Replacement)

Schedule 1  
Page 2 of 2



## VHF Mobile Radio Replacement (Owned vs. Leased Sites)

Study Discount Rate: 8.50%

Schedule 2  
Page 1 of 2

Year	14 Hydro Owned Sites (Trunked Radio System)				5 Hydro Owned Sites (Trunked Radio System)				NPV Comparison (Alt. 2 - Alt. 1)	
	Capital Costs	O&M Costs	Total	CPW to 2004	Capital Costs	O&M Costs	Total	CPW to 2004		CPW to 2004
2004	3,048,000		3,048,000	3,048,000	3,048,000		3,048,000	3,048,000	\$	-
2005	5,802,000	569,250	6,371,250	8,920,120	5,802,000	864,639	6,666,639	9,192,368	\$	272,248
2006		569,250	569,250	9,403,672		864,639	864,639	9,926,840	\$	523,168
2007		569,250	569,250	9,849,343		864,639	864,639	10,603,773	\$	754,430
2008		569,250	569,250	10,260,099		864,639	864,639	11,227,674	\$	967,575
2009		569,250	569,250	10,638,676		864,639	864,639	11,802,698	\$	1,164,022
2010		569,250	569,250	10,987,595		864,639	864,639	12,332,674	\$	1,345,080
2011		569,250	569,250	11,309,179		864,639	864,639	12,821,132	\$	1,511,953
2012		569,250	569,250	11,605,570		864,639	864,639	13,271,323	\$	1,665,753
2013		569,250	569,250	11,878,742		864,639	864,639	13,686,246	\$	1,807,504
2014		569,250	569,250	12,130,513		864,639	864,639	14,068,663	\$	1,938,150
2015		569,250	569,250	12,362,560		864,639	864,639	14,421,121	\$	2,058,561
2016		569,250	569,250	12,576,428		864,639	864,639	14,745,967	\$	2,169,539
2017		569,250	569,250	12,773,542		864,639	864,639	15,045,365	\$	2,271,823
2018		569,250	569,250	12,955,213		864,639	864,639	15,321,307	\$	2,366,094
2019		569,250	569,250	13,122,652		864,639	864,639	15,575,632	\$	2,452,980

Notes:

1. Trunked Radio System estimate based on figures used in Capital Job cost.
2. Operations and Maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier.
3. Maintenance costs for both systems are assumed to be identical.
4. 15 year life span of system assumed.
5. It is assumed that Hydro will be the sole user.
6. The 5 sites for which there is no leased alternative are: Blue Grass Hill, Granite Canal, Bay D'Espoir, Godaleich Hill and Blue Mountain.
7. The other 9 sites which the repeaters can be moved to owned facilities are: Hawke Hill, Chapel Arm Hill, Bull Arm Hill, Gull Pond Hill, Shoal Harbour Hill, Square Pond Hill, Sandy Brook Hill, Notre Dame Hill and Mary March Hill.

VHF Mobile Radio Replacement (Owned vs. Leased Sites)

