PUB-Nalcor-85 Muskrat Falls Review

Page 1 of 1

1	Q.	Provide Tables 2-2, 2-3 and A-1 and Figure 5-1 from Hydro's Generation Planning
2		Issues 2009 Mid Year Report dated July 2009 submitted to the Board as part of
3		Hydro's 2010 Capital Budget.
4		

5

6

A. Please see the attached pages showing the requested tables and figure.

Table 2-2

Electricity Load Growth Summary – 2009 PLF						
		2008-2013	2008-2018	2008-2028		
	HVdc link	1.9%	1.1%	1.1%		
Utility ¹	Isolated Island	1.8%	1.3%	1.1%		
	HVdc link	0.0%	0.1%	0.1%		
Industrial ²	Isolated Island	0.0%	0.1%	0.1%		
	HVdc link	1.4%	0.8%	0.8%		
Total	Isolated Island	1.3%	1.0%	0.9%		

- 1. Utility load is the summation of Newfoundland Power and Hydro Rural.
- 2. Industrial load is the summation of Corner Brook Pulp and Paper, AbitibiBowater³, North Atlantic Refining, Teck Resources and Vale Inco NL.

Table 2-3 provides a summary of the 2009 PLF projections for electric power and energy for the System for the period 2009 to 2018. Similar long-term projections are also prepared for the Labrador Interconnected System and for Hydro's Isolated Diesel Systems to derive a Provincial electricity load forecast. Appendix A contains the longer term PLF that was used to complete the generation expansion analysis.

³ AbitibiBowater ceased production at its Grand Falls newsprint mill in February 2009.

Table 2-3

Electricity Load Summary – 2009 PLF						
	Utility ¹		Industrial ¹		Total System ²	
HVdc Link	Maximum Demand (MW)	Firm Energy (GWh)	Maximum Demand ³ (MW)	Firm Energy (GWh)	Maximum Demand (MW)	Firm Energy (GWh)
2009	1,326	5,985	286	1,603	1,592	7,781
2010	1,351	6,100	196	1,435	1,534	7,727
2011	1,376	6,210	236	1,456	1,568	7,858
2012	1,400	6,348	274	1,679	1,604	8,223
2013	1,417	6,417	282	1,984	1,673	8,601
2014	1,437	6,501	275	2,009	1,686	8,710
2015	1,450	6,588	275	2,009	1,699	8,798
2016	1,469	6,660	275	2,009	1,718	8,871
2017	1,485	6,669	275	2,009	1,733	8,881
2018	1,488	6,473	275	2,009	1,737	8,682
	Utility ¹		Industrial ¹		Total System ²	
Isolated	Maximum	Firm	Maximum	Firm	Maximum	Firm
Island	Demand (MW)	Energy (GWh)	Demand (MW)	Energy (GWh)	Demand (MW)	Energy (GWh)
2009	1,326	5,985	286	1,603	1,592	7,781
2010	1,351	6,100	196	1,435	1,534	7,727
2011	1,376	6,210	236	1,456	1,568	7,858
2012	1,399	6,300	274	1,679	1,603	8,174
2013	1,416	6,366	282	1,984	1,672	8,550
2014	1,431	6,431	275	2,009	1,680	8,640
2015	1,443	6,481	275	2,009	1,691	8,691
2016	1,453	6,562	275	2,009	1,702	8,772
2017	1,471	6,574	275	2,009	1,719	8,784
2018	1,477	6,613	275	2,009	1,726	8,824

Note: 1. Utility and Industrial demands are non-coincident peak demands.

- 2. Total System is the total Island Interconnected System and includes losses. Demands are coincident peak demands.
- 3. Maximum demand in 2009 includes AbitibiBowater paper mill.

Figure 5-1 presents a graphical representation of historical and forecasted load and system capability for the HVdc link and Isolated Island scenarios. It is a visual representation of the energy balance shown in Table 5-1.

ACTUAL **FORECAST** 11000 Granite Canal, Exploits River Partnership and ø Lawrence 10000 Energy (GWh) RB 9000 NUGS & 8000 2009 HVDC LINK PLF 2009 ISOLATED ISLAND PLF 7000 **TOTAL SYSTEM LOAD** 6000 1989 1994 1999 2004 2009 2014 2019 2024

Figure 5-1
Island Interconnected System Capability vs. Load Forecast

6.0 Near-Term Resource Options

This section presents a summary of identified near-term generation expansion options. It represents Hydro's current portfolio of alternatives that may be considered to fulfill future generation expansion requirements. Included is a brief project description as well as discussion surrounding project schedules; the basis for capital cost estimates; issues of bringing an alternative into service; and other issues related to generation expansion analysis.

Table A-1
2009 Planning Load Forecasts

	2009	PLF	2009 PLF		
	HVdc Lir	nk Case	Isolated Isl	and Case	
	Maximum	Firm -	Maximum	Firm _	
Vaar	Demand	Energy	Demand	Energy	
Year	[MW]	[GWh]	[MW]	[GWh]	
2009	1,592	7,781	1,592	7,781	
2010	1,534	7,727	1,534	7,727	
2011	1,568	7,858	1,568	7,858	
2012	1,604	8,223	1,603	8,174	
2013	1,673	8,601	1,672	8,550	
2014	1,686	8,710	1,680	8,640	
2015	1,699	8,798	1,691	8,691	
2016	1,718	8,871	1,702	8,772	
2017	1,733	8,881	1,719	8,784	
2018	1,737	8,682	1,726	8,824	
2019	1,712	8,534	1,734	8,887	
2020	1,693	8,579	1,745	8,936	
2021	1,702	8,636	1,756	9,027	
2022	1,713	8,757	1,773	9,100	
2023	1,732	8,883	1,785	9,199	
2024	1,751	9,005	1,801	9,233	
2025	1,770	9,113	1,809	9,290	
2026	1,787	9,211	1,819	9,362	
2027	1,803	9,326	1,831	9,444	
2028	1,820	9,445	1,844	9,525	