Tab 9
Index
January 23, 2015

MANITOBA HYDRO

2015/16 & 2016/17 GENERAL RATE APPLICATION

ENERGY SUPPLY

INDEX

Appendices

MANITOBA HYDRO
2015/16 & 2016/17 GENERAL RATE APPLICATION

ENERGY SUPPLY

9.0 OVERVIEW

Tab 9 provides information on energy supply planning as well as an estimate of energy generation based on prevailing water conditions. Section 9.1 provides highlights of the Manitoba Hydro system; Section 9.2 describes Manitoba Hydro's criteria that are utilized to ensure an adequate supply of capacity and dependable energy; Section 9.3 provides supply and demand tables that summarize the capacity and dependable energy for each year up to 2023/24; Section 9.4 provides information on the following major projects and initiatives: Keeyask GS, Manitoba-Minnesota Transmission Project, Bipole III transmission, Demand Side Management, and Pointe du Bois GS; Section 9.5 provides a description of export market conditions and Manitoba Hydro's export sales activities; Section 9.6 provides an update on water conditions and hydraulic generation based on recent water conditions; and, Section 9.7 provides information related to the loss of revenues due to the risk of an extended drought period commencing in 2016/17 with a duration of five years.

The key observations with respect to Tab 9 are:

1. Manitoba Hydro's MH14 is forecast based on expected water flows for the first year of the forecast (2014/15), median water flows for the second year of the forecast (2015/16), and the average revenues for all water flow conditions for the past 102 years for the subsequent years of the forecast (2016/17 and thereafter).

2. In the near-term, to 2016/17, projected net income from electric operations (including the proposed rate increases) is higher in MH14 as compared to MH13, largely due to favourable water flow conditions and lower finance and depreciation expense.

3. Although inflow conditions are currently favourable and there is confidence that these conditions will persist until the end of March 2015, inflow conditions in fiscal 2015/16 are very uncertain and can be quite different from those assumed in MH14. The main factor that determines water supply conditions in 2015/16 is precipitation, which is highly variable and unknown at this time. The MH14

assumes median inflows in 2015/16 which means that there is an equal probability that inflows will be higher or lower.

4. Manitoba Hydro's financial results are subject to extreme volatility based on potential changes in water flow conditions. Actual water flows and the associated financial impacts will deviate either up or down from the assumption of average. In order to maintain the 3.95% indicative annual rate increases over the long-term, it is necessary that the financial impacts of low and high water flows balance out over time.

5. The reduction in hydroelectric energy supply during periods of extended low flow conditions can have a significant negative impact on Manitoba Hydro's financial situation. A repeat of a recent historic five-year drought (1987/88 to 1992/93) starting in 2016/17 is projected to decrease the net revenue by $1.7 billion up to the year 2020/21, including finance costs. There is a significant risk that this estimate could be greater if a series of adverse conditions occurred coincident with this time period, including higher natural gas prices and import prices, or a more severe drought spanning seven-years from 2016/17 to 2022/23, (1936/37 to 1942/43), increases the cost of drought to $2.1 billion under expected market prices.

6. To ensure rate stability for customers, Manitoba Hydro's desired approach is to implement regular and reasonable rate increases, even during periods of favourable water flows, thereby balancing the inevitable years of less favourable than forecast results where water flows are below average.

In accordance with the filing requirements of Directive 5 of Order 43/13, Appendix 9.1 provides monthly hydraulic generation information, water conditions and extra-provincial energy exchange data for the months of April 2014 to December 2014. Manitoba Hydro will provide this information for January to March 2015 on a monthly basis when available.

9.1 ENERGY SUPPLY

The existing supply of power available to meet Manitoba load requirements is comprised of generating resources currently available within Manitoba and imports from neighboring U.S. utilities. Consistent with Provincial approvals stemming from the Needs For and Alternatives to (NFAT) process and environmental regulatory approvals, Keeyask G.S. and a new 500 kV US interconnection are included in the Integrated Financial Forecast (IFF14). As was previously noted in the filing, Conawapa Generating Station has been suspended for purposes of the IFF14.

IFF14 includes a number of other major projects that are required for system reliability and for transmitting existing and future northern generation.

9.2 POWER RESOURCE PLANNING CRITERIA

In planning for a reliable supply of electric power, Manitoba Hydro has established the following criteria to ensure an adequate supply of capacity and energy for Manitoba. The current generation planning criteria is the same as used in the Needs For and Alternatives To submission.

The generation planning criteria consist of two components, both of which must be satisfied. First, there is a capacity criterion, used to determine the minimum quantity of generation capacity required. Second, there is an energy criterion, used to determine the minimum quantity of energy required. These two criteria are outlined in the following sections.

9.2.1 Capacity Criterion

Manitoba Hydro's capacity criterion requires that the Corporation plan to carry a minimum reserve against breakdown of plant and increase in demand above forecast of 12% of the Manitoba forecast peak demand each year plus the reserve required by any export contract in effect at the time.

The reserve is intended to protect against capacity shortfalls resulting from breakdown of generation equipment, or increases in winter peak load due extreme weather conditions. The reserve is calculated as 12% of the Manitoba forecast peak winter demand plus the reserve required by any export contract in effect at the time for each year that is forecasted. The maximum demand for capacity in Manitoba occurs in the winter season, and therefore the reserve margin of 12% is applied to the winter peak demand.

Historically, the reserve margin of 12% has been adequate for Manitoba Hydro's predominantly hydro-electric generation based system because of relatively low outage rates combined with the relatively small size of hydro-generating units. In comparison, reserve margins in predominantly thermal generation based systems are typically in the 15% range, when expressed on an installed capacity basis.

9.2.2 Energy Criterion

In addition to a capacity criterion, Manitoba Hydro has an energy criterion which recognizes the energy-constrained limitation of a hydro-electric generating system during drought conditions.

Manitoba Hydro's energy criterion requires that the corporation plan to have adequate energy resources to supply the firm energy demand in the event that the lowest recorded coincident water supply conditions are repeated; the energy supply under these conditions is referred to as dependable energy.

Historic system inflows are derived from the available record of river flows (1912-2013), which have been adjusted to represent present-use conditions and to account for systemic changes due to expected future water use and withdrawals upstream of Manitoba.

Dependable energy available in the Manitoba Hydro system is the total energy supplied from:

- hydro-electric generating stations
- thermal generating stations
- wind generation (energy only)
- planned DSM
- imports from neighbouring utilities.

9.3 SUPPLY AND DEMAND SUMMARY

A summary of the firm electric supply and demand during the winter peak (MW) for the Manitoba system between fiscal years 2014/15 and 2023/24 is provided in Figure 9.1. Demand includes the 2014 forecast of Manitoba load plus contracted extra provincial exports and capacity reserve requirements. Figure 9.2 provides a similar summary for firm energy (GWh) supply and demand during each year for the 10 year period. Figure 9.3 reflects the supply and demand for energy (GWh) for expected flow conditions for 2014/15, median flow conditions for 2015/16 and the average of all flow conditions for 2016/17 to 2023/24.

Figure 9.1: System Firm Winter Peak Demand and Capacity Resources (MW) @ generation

	Fiscal Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
	Manitoba Hydro Power Resources										
	New Hydro										
	Keeyask G.S.						90	630	630	630	630
	Total New Hydro						90	630	630	630	630
	New NUG Purchase			12	12	12	12	12	12	12	12
1	**Total New Power Resources**			**12**	**12**	**12**	**102**	**642**	**642**	**642**	**642**
	Existing Hydro	5 133	5 172	5 164	5 190	5 195	5 196	5 181	5 172	5 167	5 167
	Existing Thermal										
	Brandon Unit 5	105	105	105	105	105					
	Selkirk Gas		66	132	132	132	132	132	132	132	132
	Brandon Units 6-7 SCGT	280	280	280	280	280	280	280	280	280	280
	Total Existing Thermal	385	451	517	517	517	412	412	412	412	412
	Imports	605	605	605	605	605	605	605	605	605	605
	Bipole III Line Reduction					90	90	80	80	80	80
2	**Total Base Supply Power Resources**	**6 123**	**6 228**	**6 286**	**6 312**	**6 407**	**6 303**	**6 278**	**6 269**	**6 264**	**6 264**
3	**Total Power Resources 1+2**	**6 123**	**6 228**	**6 298**	**6 324**	**6 419**	**6 405**	**6 920**	**6 911**	**6 906**	**6 906**
	Peak Demand										
	2014 Base Load Forecast	4 716	4 803	4 861	4 985	5 068	5 166	5 223	5 284	5 342	5 400
	Less: 2014 Base DSM Forecast	- 60	- 111	- 169	- 226	- 293	- 353	- 406	- 449	- 475	- 498
4	**Manitoba Net Load**	**4 656**	**4 692**	**4 692**	**4 759**	**4 775**	**4 813**	**4 817**	**4 835**	**4 867**	**4 902**
	Contracted Exports	726	484	724	724	559	559	779	908	880	880
	Proposed Exports										
5	**Total Exports**	**726**	**484**	**724**	**724**	**559**	**559**	**779**	**908**	**880**	**880**
6	**Total Peak Demand 4+5**	**5 382**	**5 176**	**5 416**	**5 483**	**5 334**	**5 372**	**5 596**	**5 743**	**5 747**	**5 782**
7	Reserves	513	563	563	571	573	577	578	580	584	588
	System Surplus 3-6-7	**228**	**489**	**319**	**270**	**512**	**456**	**746**	**588**	**575**	**536**

Figure 9.2: System Firm Energy Demand and Dependable Resources (GWh) @ generation

	Fiscal Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
	Manitoba Hydro Power Resources										
	New Hydro										
	Keeyask						493	2 974	3 003	3 003	3 003
	Total New Hydro						493	2 974	3 003	3 003	3 003
	New NUG Purchase			97	97	97	97	97	97	97	97
1	**Total New Power Resources**			**97**	**97**	**97**	**590**	**3 071**	**3 100**	**3 100**	**3 100**
	Existing Hydro	21 928	21 924	21 892	21 878	21 880	21 863	21 816	21 775	21 743	21 743
	Existing Thermal										
	Brandon Unit 5	811	811	811	811	811	592				
	Selkirk Gas	953	953	953	953	953	953	953	953	953	953
	Brandon Units 6-7 SCGT	2 354	2 354	2 354	2 354	2 354	2 354	2 354	2 354	2 354	2 354
	Total Existing Thermal	4 118	4 118	4 118	4 118	4 118	3 899	3 307	3 307	3 307	3 307
	Imports	3 440	3 852	3 912	3 912	3 912	3 912	5 304	5 582	5 582	5 582
	Existing Wind	771	771	771	771	771	771	771	771	771	771
	Bipole III Reduced Losses					101	101	177	177	177	177
2	**Total Base Supply Power Resources**	**30 257**	**30 665**	**30 693**	**30 679**	**30 782**	**30 546**	**31 375**	**31 612**	**31 580**	31 580
3	**Total Power Resources 1+2**	**30 257**	**30 665**	**30 790**	**30 776**	**30 878**	**31 136**	**34 446**	**34 711**	**34 680**	**34 680**
	Demand										
	2014 Base Load Forecast	25 639	26 130	26 436	27 174	27 662	28 247	28 583	28 937	29 284	29 626
	Construction Power - Hydro		110	110	110	110	110	83			
	Less: 2014 Base DSM Forecast	- 283	- 487	- 780	-1 056	-1 407	-1 730	-1 988	-2 183	-2 296	-2 405
4	**Net Load**	**25 356**	**25 753**	**25 766**	**26 228**	**26 365**	**26 627**	**26 678**	**26 754**	**26 988**	**27 221**
	Contracted Exports	3 421	2 632	3 246	3 366	3 165	3 125	3 951	4 603	4 503	4 476
	Proposed Exports										
	Less: Total Adverse Water		- 309	- 370	- 370	- 370	- 370	- 370	- 489	- 513	- 513
5	**Total Net Exports**	**3 421**	**2 323**	**2 876**	**2 995**	**2 795**	**2 754**	**3 580**	**4 114**	**3 990**	**3 963**
6	**Total Demand 4+5**	**28 776**	**28 076**	**28 642**	**29 224**	**29 160**	**29 381**	**30 258**	**30 868**	**30 978**	**31 184**
	System Surplus 3-6	**1 481**	**2 589**	**2 148**	**1 552**	**1 718**	**1 754**	**4 187**	**3 843**	**3 702**	**3 496**

Figure 9.3: System Firm Energy Demand and Resources (GWh) @ generation
2014/15 Expected Water Flow Conditions
2015/16 Median Water Flow Conditions
2016/17 -2023/24 Average of All Flow Conditions

Fiscal Year			2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
	Manitoba Hydro Power Resources											
	Hydro Generation		35 116	34 418	31 084	31 129	30 907	31 456	34 535	35 275	35 251	35 253
	Bipole III Reduced Losses						324	324	352	352	352	352
	Thermal Generation		101	121	358	383	385	328	166	156	162	154
	Existing Wind		918	898	907	907	907	907	907	907	907	907
	New NUG Purchase				97	97	97	97	97	97	97	97
	Imports		180	328	1 355	1 441	1 445	1 392	1 861	2 042	2 109	2 119
1	**Total Power Resources**		**36 315**	**35 765**	**33 800**	**33 956**	**34 064**	**34 503**	**37 917**	**38 828**	**38 877**	**38 881**
	Demand											
	2014 Base Load Forecast		25 321	25 754	26 436	27 174	27 662	28 247	28 583	28 937	29 284	29 626
	Construction Power - Hydro				110	110	110	110	83			
	Less: 2014 Base DSM Forecast		- 305	- 415	- 780	-1 056	-1 407	-1 730	-1 988	-2 183	-2 296	-2 405
2	**Net Load**		**25 016**	**25 339**	**25 766**	**26 228**	**26 365**	**26 627**	**26 678**	**26 754**	**26 988**	**27 221**
3	Contracted Exports		4 537	4 051	3 406	3 438	3 232	3 192	4 474	5 343	5 278	5 251
4	**Total Demand**	2+3	**29 553**	**29 390**	**29 172**	**29 667**	**29 598**	**29 819**	**31 153**	**32 097**	**32 266**	**32 472**
	System Surplus	1-4	**6 762**	**6 375**	**4 628**	**4 290**	**4 466**	**4 684**	**6 764**	**6 731**	**6 611**	**6 409**

9.4 MAJOR PROJECTS

IFF14 includes several major projects to which Manitoba Hydro has committed or for which there is a reasonable expectation that Manitoba Hydro will commit. The characteristics of these initiatives are summarized below.

Keeyask Generation Project

On May 7, 2014 the Minister of Conservation and Water Stewardship released the Manitoba Clean Environment Commission's ("CEC") report on the Keeyask Generation Project, recommending that the project be issued a licence under the Manitoba Environment Act.

The Keeyask Project is a collaborative effort between Manitoba Hydro and four Manitoba First Nations, working together as the Keeyask Hydropower Limited Partnership. On July 16, 2014 construction began on the Keeyask Generating Station with a planned first unit in-service date in 2019. Keeyask is located upstream of the Kettle Generating Station on the Nelson River with a design rating of 695 MW under ideal operating conditions and a winter peak rating of 630 MW which is utilized for planning purposes.

Manitoba – Minnesota Transmission Project

The Manitoba – Minnesota Transmission Project is a 500 kV AC transmission line in southeastern Manitoba, connecting at the border with Minnesota Power's proposed Great Northern Transmission Line. The Manitoba – Minnesota Transmission Project will enable power to be exported to the United States based on current sales agreements, improve reliability and import capacity in emergency and drought situations, and increase access to markets in the US. The projected in-service date is 2020/21. The project requires several Canadian and US regulatory approvals which are expected to be received by late 2016.

Bipole III Reliability Project

Based on recommendations from the Clean Environment Commission, Manitoba Conservation and Water Stewardship granted an Environment Act licence to Manitoba Hydro on August 14, 2013 for the construction, operation, and maintenance of the Bipole III Project. Construction began in fall 2013. The project has a planned in-service date of 2018/19.

Demand Side Management

The Demand Side Management Programs (DSM) targets a 1,652 MW reduction in peak load and a 6,344 GWh reduction in annual energy consumption by 2028/29, which reflects a minor upward adjustment to the forecast in the Power Smart Plan. As of March 31, 2014 these programs have achieved a 500 MW reduction of peak load and a 2,307 GWh reduction in annual energy consumption as at 2028/29. Savings due to the Curtailable Rate Program total 161 MW. Anticipated changes to Codes and Standards for new equipment (e.g. refrigerators, electric motors and lighting) are expected to result in reductions of 409 MW and 1,240 GWh which are reflected in Manitoba Hydro's load forecast. The remaining reduction of 582 MW and 2797 GWh is shown as a reduction to Manitoba load in the Supply and Demand Tables.

Pointe du Bois Generating Station

The Spillway Replacement Project is on schedule to be completed by summer 2015. A new spillway became operational in August 2014. Work over the next year, will include completing that the main dam and decommissioning the old spillway.

Pointe du Bois Generating Station is assumed to operate until 2039/40. The ability to extend the life of the Pointe du Bois Generating Station is currently under review.

Non-Utility Generation

Manitoba Hydro and Kineticor Resource Corporation executed a Term Sheet for the purchase of 11.65 MW of flare gas generated electricity over a 20 year term. This agreement is assumed to add 97 GWh of dependable energy to Manitoba Hydro's system.

9.5 EXPORT MARKETS AND EXPORT SALES

Current Market Conditions

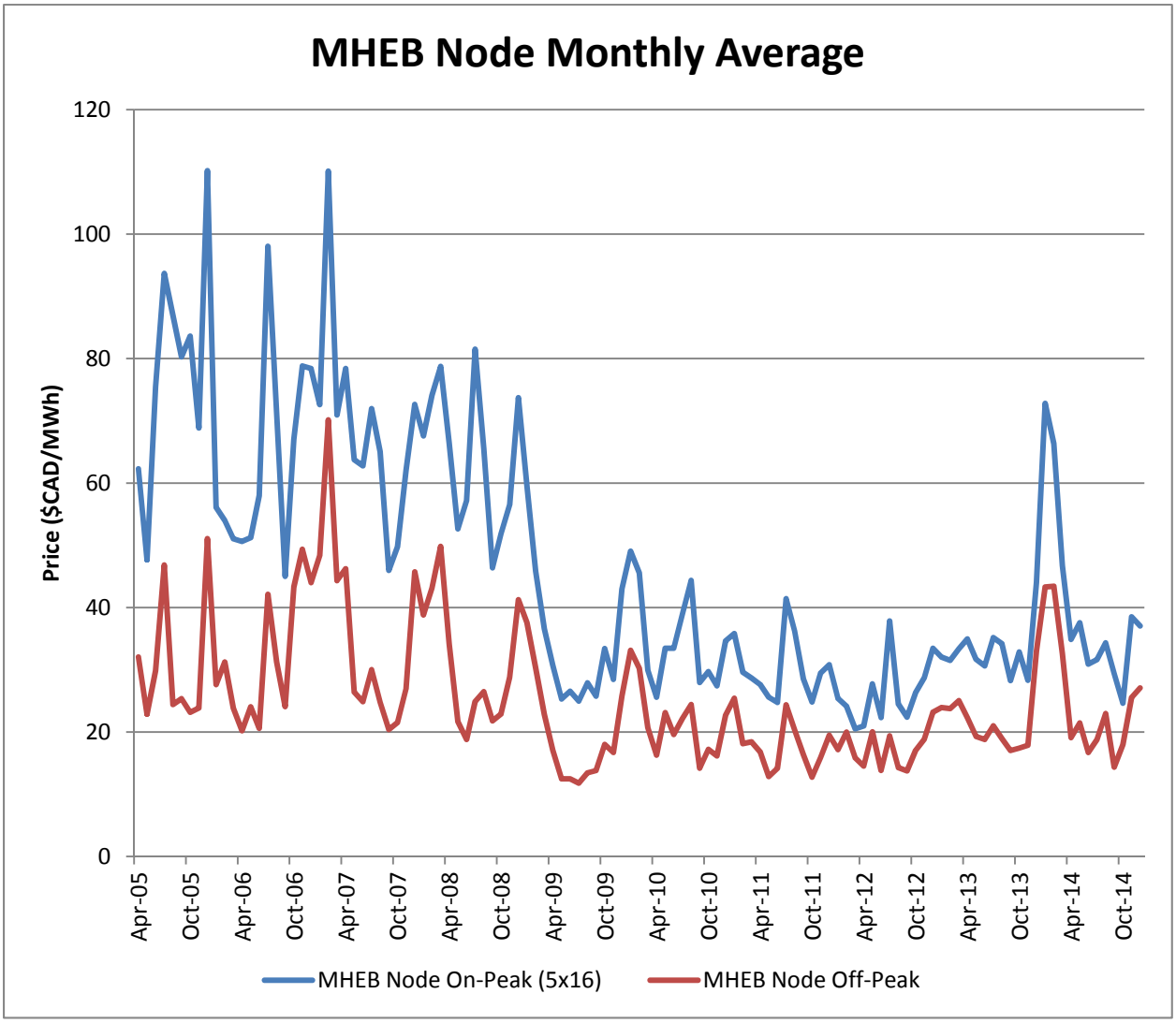
Manitoba Hydro's U.S. export customers' load forecasts reflect modest and in some cases negative load growth. Despite relatively flat short term load forecasts that grow modestly in the mid to long-term, U.S. customer interest remains strong for long-term firm hydro power as they are focusing on replacing aging coal and nuclear generating facilities and to meet current and future emission constraints. Given President Obama's Clean Power Plan to reduce carbon emissions and more stringent environmental controls (most recently to reduce ozone levels) for existing and new coal generation, volatility and long term uncertainty of the costs for new natural gas-fired generation, and weak public support for nuclear generation, there is continued interest in long-term, fixed price, non-emitting supplies from Manitoba. Hydroelectric generation is also recognized as a complementary partner to new intermittent renewable generation resources such as wind and solar.

Saskatchewan's load growth is robust due to strong economic performance and increasing industrial loads. SaskPower is also addressing new Canadian federal regulations on the use of coal to generate electricity. Approximately 50% of their current generating capability is fueled with coal and many of these stations will need to be retired if not upgraded to expensive clean coal technology. SaskPower remains interested in diversifying their supply portfolio with additional long term purchases from Manitoba Hydro.

Prices for Manitoba Hydro's export energy increased significantly in the ten years prior to 2009 as a result of US electricity market restructuring, a general tightening of supply, and a general rise in natural gas prices. However, spot and short-term energy prices decreased by approximately 50% in 2009 primarily as a result of significantly lower

natural gas prices. In addition, modest load growth since 2009, the establishment of the MISO Ancillary Services Market, and the large scale development of new wind resources in North Dakota and Minnesota have also put downward pressure on energy prices. Figure 9.4 shows the history of monthly average on-peak (5 days × 16 hours) and off-peak (balance of hours) electricity prices for the MISO Manitoba Hydro Commercial Pricing Node.

Figure 9.4 Monthly Average On-Peak and Off-peak Prices at the MHEB Commercial Pricing Node



Manitoba Hydro continues to have good access to the U.S. market operated by the MISO. Access to the US will expand with the planned in-service of the new 500 kV transmission interconnection between Manitoba and Minnesota in 2020/21. Although demand for

Manitoba Hydro's electricity is strong in Saskatchewan, current access is limited. However, Manitoba Hydro and SaskPower are considering new transmission investments should a long-term power sale agreement come to fruition.

In recent years, market access to the Ontario market has been less favourable. Operated by the Independent Electricity System Operator (IESO), recent Ontario market rule changes and interpretations of those rules, in Manitoba Hydro's opinion, place external market participants at a disadvantage relative to generators located within Ontario, and negatively impacts competition overall. These developments have reduced Manitoba Hydro's incentive to participate in the IESO market. Market rules in Ontario continue to evolve, and are designed for the benefit of the load and local generation within the market. It is a continual challenge for Manitoba Hydro to maintain non-discriminatory access to Ontario.

From an overall perspective, open transmission access in the US and open energy markets have been very beneficial to Manitoba Hydro. Expanded access to the US and Saskatchewan will provide additional export opportunities, import capability and enhance Manitoba reliability.

Manitoba Hydro's recent average pricing experience of long-term dependable sales versus on-peak (5×16) opportunity sales is depicted in Figure 9.5. As most dependable sales are for on-peak energy, the price comparison to on-peak opportunity sales is appropriate. The prices shown for dependable sales include demand charges. In several years prior to the economic downturn of 2008-09, on-peak opportunity sales prices regularly exceeded dependable prices. However this changed abruptly in the spring of 2009 as load reduced and natural gas prices decreased.

Figure 9.5 Monthly Average On-Peak Pricing (Dependable vs. Opportunity)

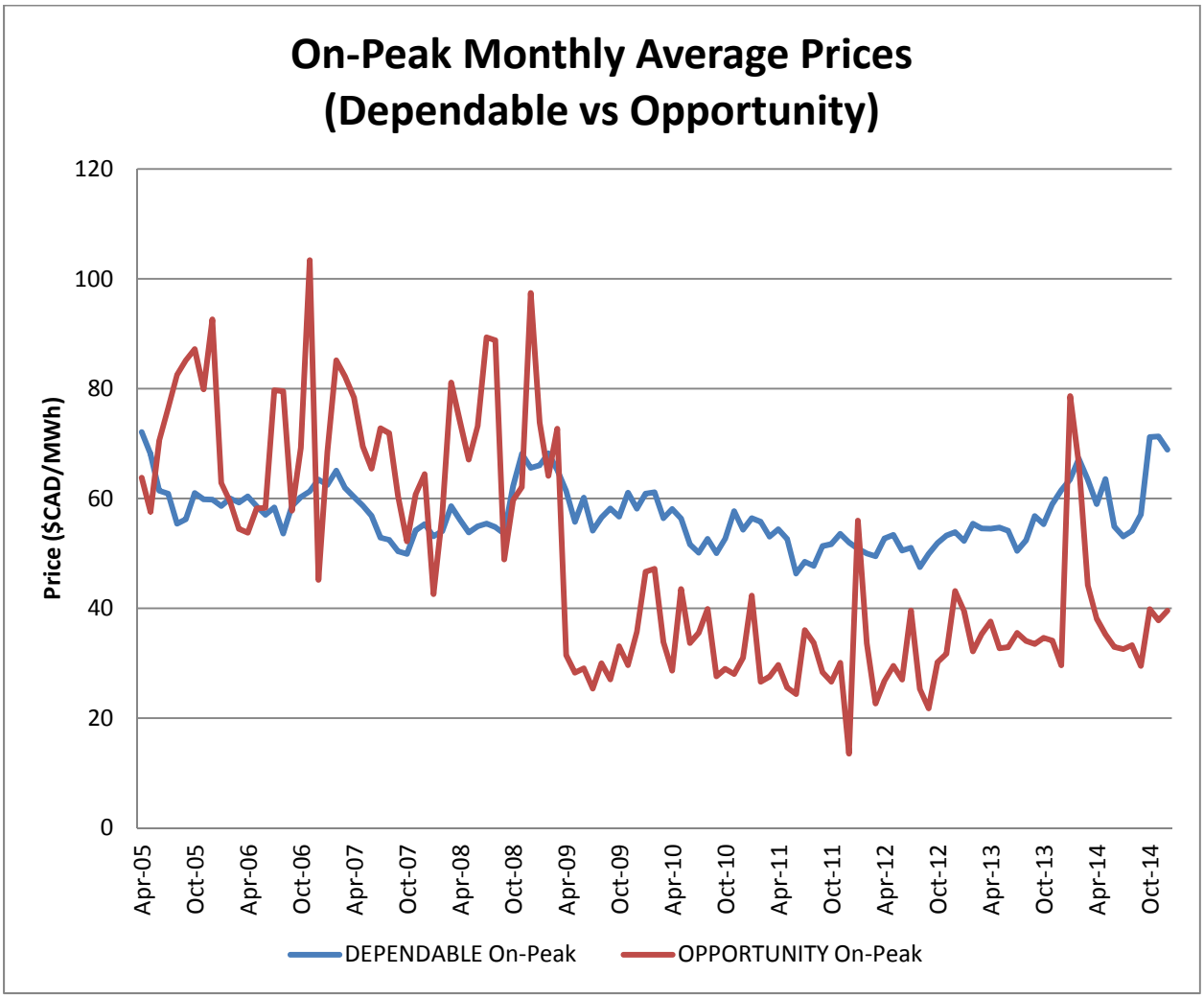


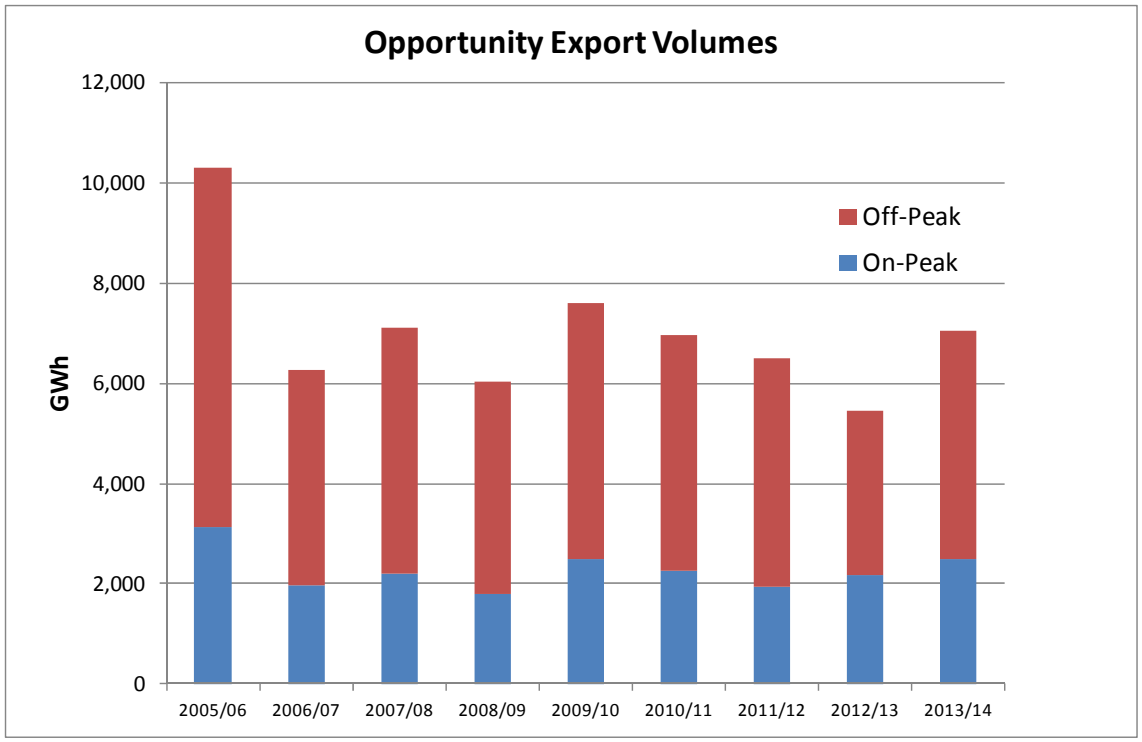
Figure 9.6 includes opportunity export volumes and average prices from the start of the MISO Day 2 Energy Market in April 2005 through December 2014. Figure 9.7 charts these opportunity export volumes for both on-peak (5×16) and off-peak periods, for the full fiscal years in this period. Opportunity export volumes are affected by water supply conditions, dependable export sales, and Manitoba load requirements. As a result, opportunity export volumes show significant variability year-to-year.

Figure 9.6 Opportunity Export Sales

OPPORTUNITY EXPORTS						
	On Peak GWh	Off Peak GWh	On Peak Avg Price (CAD$)	Off Peak Avg Price (CAD$)	On Peak Revenues (CAD $M)	Off Peak Revenues (CAD $M)
2005/06	3,142	7,161	72.73	36.75	245	265
2006/07	1,972	4,278	66.26	37.44	135	160
2007/08	2,212	4,887	66.19	32.97	162	166
2008/09	1,802	4,237	71.78	29.37	153	134
2009/10	2,497	5,100	31.14	18.74	84	100
2010/11	2,268	4,699	31.90	21.23	76	105
2011/12	1,952	4,550	28.76	22.51	59	93
2012/13	2,165	3,286	29.87	22.02	69	77
2013/14	2,492	4,566	36.95	24.46	82	121
2014/15[a]	1,789	3,878	33.33	21.70	67	92

(a) Fiscal year through December 2014.

Figure 9.7 Opportunity Export Volumes



The average price received for opportunity energy softened considerably in 2009/10 and, as shown in Figure 9.6, on-peak prices dropped more in relative and absolute terms than off-peak prices. As previously noted, spot and short-term energy prices decreased by approximately 50% in 2009 primarily as a result of significantly lower natural gas prices. In addition, modest load growth since 2009, the establishment of the MISO Ancillary Services Market, and the large scale development of new wind resources in North Dakota and Minnesota have also put downward pressure on energy prices.

Figures 9.8 and, 9.9 provide export volumes, revenues and average prices for the various export sales aggregated over all on and off-peak hours. Figure 9.8 summarizes annual total exports volumes, revenues and prices for Dependable, Opportunity and Merchant sales. Figure 9.9 shows Dependable and Opportunity Sales for the US market only.

Figure 9.8 Total Export Sales

TOTAL SALES									
	DEPENDABLE SALES CAD			OPPORTUNITY SALES CAD			SYSTEM MERCHANT SALES CAD		
	GWh	$M	AvgPrice	GWh	$M	AvgPrice	GWh	$M	AvgPrice
2000/01	6,352	258	40.64	5,801	217	37.39	0	0	0
2001/02	6,277	322	51.65	6,022	281	46.63	0	0	0
2002/03	6,544	339	53.37	3,191	137	42.97	0	0	0
2003/04	6,231	295	48.46	735	52	48.46	11	0.5	44.43
2004/05	5,633	290	51.44	4,798	239	51.44	315	11	33.32
2005/06	4,044	240	59.25	10,303	510	47.73	919	63	60.07
2006/07	3,654	218	59.67	6,250	295	46.53	1,206	60	43.38
2007/08	3,921	209	53.22	7,099	328	44.42	1,262	72	49.17
2008/09	4,087	233	57.12	6,039	287	43.64	1,598	86	48.08
2009/10	3,263	186	56.99	7,597	184	22.98	775	26	28.29
2010/11	3,377	172	51.09	6,967	181	24.77	712	27	36.93
2011/12	3,742	175	46.79	6,502	152	22.18	436	17	31.10
2012/13	3,636	177	48.69	5,451	146	25.18	150	9	34.18
2013/14	3,479	182	52.22	7,058	203	28.92	331	34	63.32
2014/15[a]	2,569	140	54.61	5,667	159	26.92	409	14	34.24

(b) Fiscal year through December 2014.

Figure 9.9 U.S. Export Sales

TOTAL U.S. SALES									
	U.S. DEPENDABLE SALES			U.S. OPPORTUNITY SALES			U.S. SYSTEM MERCHANT SALES		
	GWh	CAD $M	AvgPrice	GWh	CAD $M	AvgPrice	GWh	CAD $M	AvgPrice
2000/01	4,895	199	40.69	4,511	167	36.95	0	0	0
2001/02	4,767	263	55.15	5,083	247	48.66	0	0	0
2002/03	4,947	277	56.09	2,713	115	42.30	0	0	0
2003/04	5,245	259	49.45	507	35	69.42	0	0	0
2004/05	5,633	290	51.44	3,218	171	54.48	109	1	10.64
2005/06	4,044	240	59.25	8,879	401	45.12	0	0	0
2006/07	3,654	218	59.67	5,877	270	46.24	0	0	0
2007/08	3,921	209	53.22	6,618	289	44.19	0	0	0
2008/09	4,087	233	57.12	5,622	237	43.24	0	0	0
2009/10	3,263	186	56.99	7,224	160	22.28	33	2	0
2010/11	3,377	172	51.09	6,062	146	24.44	5	0.3	37.82
2011/12	3,742	175	46.79	5,616	117	21.13	80	3	35.21
2012/13	3,636	177	48.69	4,690	113	23.62	63	2	29.92
2013/14	3,479	182	52.22	6,336	182	27.70	185	7	37.17
2014/15[a]	2,569	140	54.61	4,948	134	25.79	400	13	33.66

(a) Fiscal year through December 2014.

Long-Term Sales – New Agreements and Sales under Negotiation

Manitoba Hydro has a number of signed long-term power sales agreements, several requiring the construction of Keeyask and new transmission in Manitoba and the US. Over the past year, Manitoba Hydro has also signed several memorandum of understandings to continue discussion on new arrangements in the post-2020 timeframe both in the U.S. and Canada.

All long-term sales agreements, term sheets, memorandum of understandings and discussions are protected by confidentiality provisions and mutual non-disclosure agreements signed by Manitoba Hydro and the respective counterparty. Therefore, specific pricing and terms and conditions cannot be provided in a public forum.

Xcel Energy Power Sale Agreements

On May 27, 2010, Manitoba Hydro and Xcel Energy entered into three agreements providing for (i) the sale to Northern States Power of 375 megawatts of system power in

the summer seasons and 325 megawatts of system power in the winter seasons for May 2015 through April 2025, (ii) the sale to Northern States Power of 125 megawatts of system power for May 2021 through April 2025 conditional on the construction by Manitoba Hydro of major new hydro-electric generating facilities, (iii) a 350 megawatt seasonal diversity agreement with Northern States Power where capacity and energy is exported from Manitoba in the summer months and capacity and energy (if required by Manitoba Hydro) is returned to Manitoba in the winter months for the period May 2015 through April 2025.

Minnesota Power

On May 19, 2011 Manitoba Hydro and Minnesota Power entered into two agreements providing for (i) a 250 megawatt system power sale to Minnesota Power from June 2020 to May 2035, (ii) an Energy Exchange Agreement to provide Manitoba Hydro with firm transmission service to import energy during the period June 2020 to May 2035. The 250 megawatt System Power Sale Agreement is conditional upon the construction of major new hydro-electric generating facilities and new transmission in Manitoba and the U.S.

On July 30, 2014, Manitoba Hydro and Minnesota Power signed two additional definitive agreements: (i) a 133 MW Energy Sale to commence when the new 500kV transmission line is placed in service in approximately June, 2020 and continue until 2040; and (ii) a 2014 Energy Exchange Agreement to commence when the new 500kV transmission line is placed in-service and continues until 2040. These agreements provide Manitoba Hydro the right to export or import up to 133 MWh per hour of energy from Minnesota Power at Manitoba Hydro's sole discretion on the new 500 kV interconnection.

Wisconsin Public Service

On May 19, 2011, Manitoba Hydro and Wisconsin Public Service entered a contract providing for the sale of 100 MW of System Power during the period June 2021 to May 2027, dependant on the construction of Keeyask.

On February 26, 2014 Wisconsin Public Service and Manitoba Hydro entered into the following four definitive agreements:

(a) A 308 MW System Power Sale Agreement for 10 years beginning with the fourth unit of the Conawapa Generating Station going into service. The sale is dependent upon construction of the Conawapa generating station and a new 500 kV interconnection to the US.

(b) A 108 MW System Power Sale Agreement for the five year period June 2016 through May 2021. The capacity and dependable energy supporting this agreement do not require the construction of any new generation or transmission facilities.

(c) A 200 MW Energy Purchase Agreement for the period June 2020 through May 2036. The agreement is conditional upon the construction of the new 500 kV interconnection to the US, and will utilize 200 MW of the 698 MW of additional import capability provided by the transmission line.

(d) An 8 MW Energy Sale Agreement for the period June 2023 through May 2029. The 8 MW Energy Sale Agreement in conjunction with the 100 MW System Power Sale Agreement signed on May 19, 2011 for the same period utilizes all of the existing 108 MW of firm transmission service that is available between Manitoba Hydro and Wisconsin Public Service.

9.6 WATER CONDITIONS

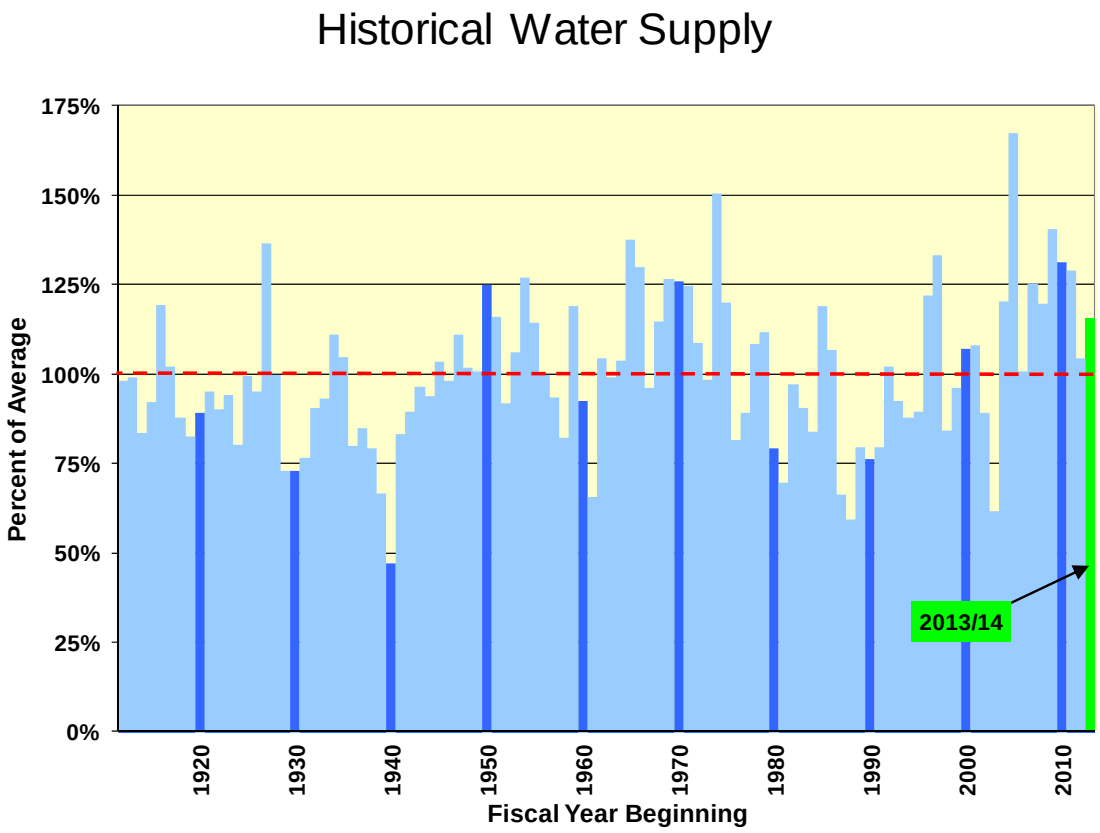
Precipitation

Overall precipitation across the Nelson-Churchill basin was near normal for the period April 1st, 2014 to November 30th, 2014. However, the timing of precipitation over this period was not uniform. Roughly two thirds of the total precipitation fell prior to the end of July, whereas the second half of this period was drier than normal. From August through November, precipitation was around 80% of average, or a 10th percentile event. In other words 90% of the time the system precipitation is higher than what was experienced in those four months of 2014. With low amounts of late-summer and fall precipitation resulting in below average soil moisture conditions, inflows from any snow melt runoff in the spring of 2015 are more likely to be below average.

Inflows

Annual total inflows (Figure 9.10) to the Manitoba Hydro system were well above average in 2013/14 extending the consecutive sequence of average or better water flows to ten years. Although 2014/15 is still underway, inflows for 2014/15 will be above average making this an eleven year sequence; the longest wet cycle on record. The previous record was five years. As indicated in Figure 9.10, the hydrologic record shows a history of long periods of above average conditions followed by similarly long periods of below average conditions and that the transition from one period to the other can occur quickly.

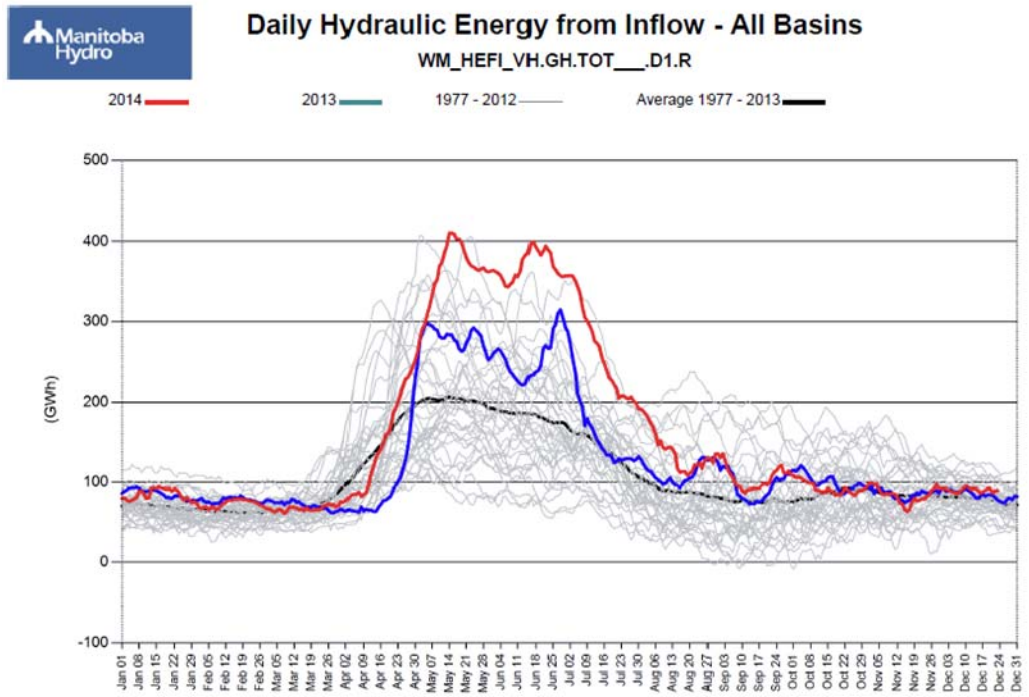
Figure 9.10 Historical Water Supply



The snowmelt runoff at the beginning of 2014/15 was delayed due to a late spring melt but flows transitioned quickly to well above average thereafter (Figure 9.11) reaching new record highs by mid-May as a result of heavy rainfall. High inflows were sustained through summer largely due to floods on the Assiniboine, Saskatchewan, and Winnipeg rivers. Flows on the Winnipeg River for the May through August period were the highest on record since 1977.

Annual system inflows for 2014/15 are projected to be among the top ten on record since 1912.

Figure 9.11 Daily Gross Hydraulic Energy from Inflow

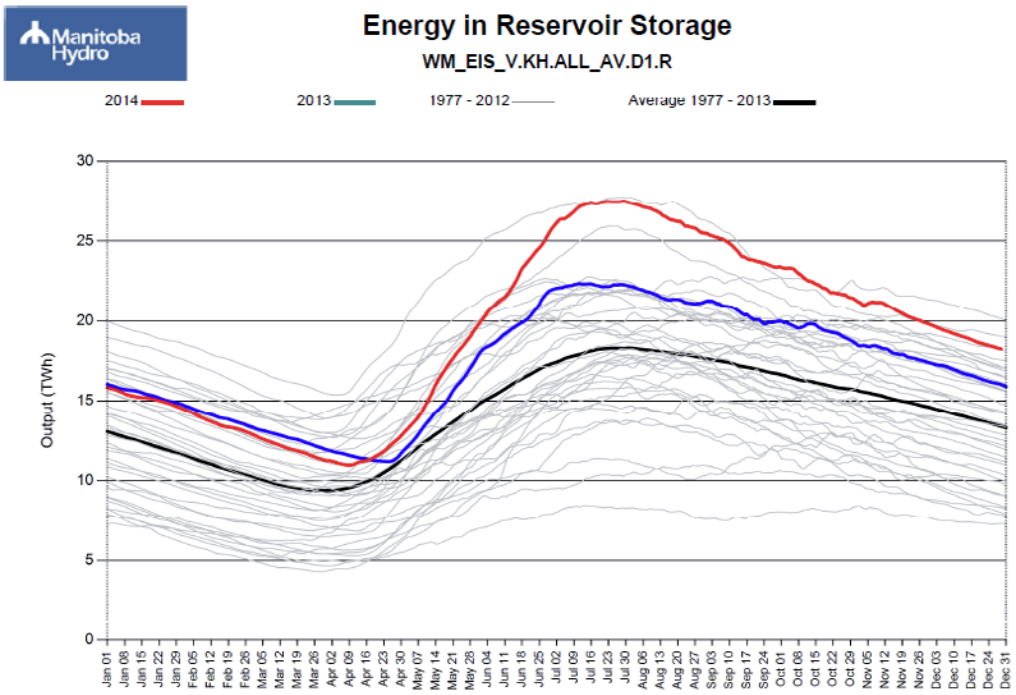


Energy in Reservoir Storage

Energy in reservoir storage is shown in Figure 9.12. This indicator is for the eighteen major reservoirs in Manitoba Hydro's watersheds including fourteen reservoirs regulated by other agencies.

As 2013/14 was an above average water year, reservoir storage was above average at the beginning of 2014/15. And with above average inflows through the first half of 2014/15 reservoir storage levels climbed steadily to near record high by July 2014. Manitoba Hydro expects energy in storage to be about 5 TWh above average at the beginning of 2015/16.

Figure 9.12 Total Energy in Reservoir Storage



Reservoir Operations

Reservoir operations in the first half of 2014/15 were centered around flood management due to the high inflows experienced on many tributaries to the system. New record flows were experienced on the Winnipeg River as a result of flooding conditions in the Rainy River and Lake of the Woods areas. Spill was required at Grand Rapids in order to manage flood inflows from the Saskatchewan River. Lake Winnipeg outflows were increased to maximum at the beginning of June, 2014 and this operation continued through to the end of October. Manitoba Hydro was required to spill water along the Nelson River from May into mid-November, 2014. In order to minimize flood levels along the lower reaches of the Nelson River, the Churchill River Diversion flow was minimized through the summer which required spillage down the Lower Churchill River from the Missi Falls Control Structure.

An extended outage of the 500 kV transmission line to the U.S. during October and early November restricted Manitoba Hydro's ability to export electricity, which resulted in more spillage during this period.

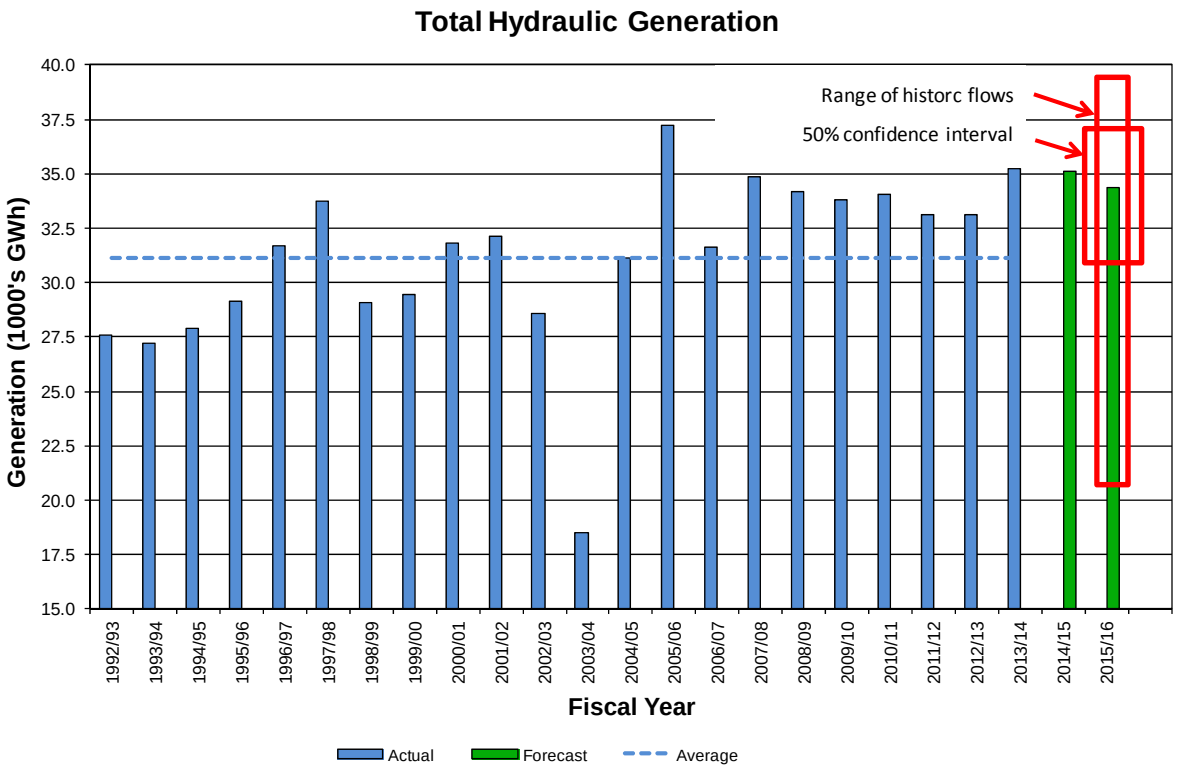
Given the favourable storage condition, Manitoba Hydro will continue to maximize Lake Winnipeg outflows and Churchill River Diversion flows through the winter in order to maximize Nelson River generation. However, as explained above, late summer and fall precipitation has been well below normal. The effect of below average fall antecedent precipitation is to lower spring snowmelt runoff. Manitoba Hydro will continue to monitor snowpack conditions through the winter months.

Total Hydraulic Generation

The forecast for 2015/16 assumes normal precipitation during the year. However, precipitation amounts can vary widely and as a result there is considerable uncertainty around the hydraulic generation forecast. Figure 9.13 shows the potential range assuming historic high and low flow years. In terms of the financial impact in 2015/16, the range of flow-related costs and revenues is $80M favourable with highest flows, and $380M unfavorable with lowest flows on record.

Total actual hydraulic generation since the in-service of Limestone Generating Station is shown in Figure 9.13 as well as the hydraulic generation forecast for 2014/15 and 2015/16.

Figure 9.13 Actual and Forecast Total Hydraulic Generation



9.7 FINANCIAL IMPACT OF DROUGHT

The reduction in hydroelectric energy supply during periods of extended low flow conditions can have a significant negative impact on Manitoba Hydro's financial situation. A repeat of a recent historic five-year drought (1987/88 to 1992/93) starting in 2016/17 would result in the lowest flow year of that historic drought occurring in 2017/18. In that lowest flow year (2017/18) net revenue would decrease by $0.5 billion compared to the net revenue based on the average of all flow conditions for that year. If the five-year historic drought (1987/88 to 1992/93) was repeated starting in 2016/17 and ending in 2020/21, net revenue would be about $1.5 billion less than expected over the five year period. This impact on net revenues would increase to $1.7 billion with consideration of financing costs associated with additional borrowing requirements up to the year 2020/21.

The estimate of $1.7 billion for the financial impact of a five-year drought is due to a significant reduction in export revenue combined with the requirement to operate high-cost Manitoba Hydro thermal generation facilities for long time periods and to import significant quantities of high-cost energy. There is a significant risk that this estimate

could be greater if a series of adverse conditions occurred coincident with this time period. It is possible that natural gas prices, and consequently electricity prices in the export market, could be higher resulting not only in additional cost to operate Manitoba Hydro's gas-fired generation but also resulting in increased cost of import energy, especially during peak periods. Based on a high price scenario, the financial impact of a five-year drought would increase by $0.3 billion compared to the expected price scenario.

Another factor that has similar impacts as electricity prices in the export and import market is the currency exchange rate for the US dollar. A low Canadian dollar relative to the US dollar increases the export revenue that is lost in a drought and increases the cost of import energy and cost of operating thermal generation in Manitoba. This would be offset to some degree by reductions in finance expense denominated in USD.

A further factor that could increase the cost of drought is the occurrence of a more extreme drought compared to that which occurred during the five year period between 1987 and 1992. For example, a seven-year drought spanning from 2016/17 to 2022/23, based on flows from the period 1936/37 to 1942/43, increases the cost of drought from $1.5 billion to $2.1 billion under expected market prices.