

Supply and Demand Tables

DSM Analysis

Plan 12 K19/C40/750 MW– DSM Level 2

Date: April 2014

System Firm Winter Peak Demand and Capacity Resources (MW) @ generation
NFAT 2013 Update
K19/C40/750 MW/DSM Level 2

Fiscal Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Power Resources																		
New Power Resources																		
New Hydro																		
Conawapa																		
Keeyask																		
1	Total New Hydro						90	630	630	630	630	630	630	630	630	630	630	630
New Thermal																		
SCGT																		
CCGT																		
2	Total New Thermal																	
New Imports																		
Contracted																		
Proposed																		
3	Total New Imports																	
4	Total New Power Resources 1+2+3						90	630	630	630	630	630	630	630	630	630	630	630
Base Supply Power Resources																		
Existing Hydro																		
Existing Thermal																		
Brandon Coal - Unit 5																		
Selkirk Gas																		
Brandon Units 6-7 SCGT																		
Contracted Imports																		
Proposed Imports																		
Pointe du Bois Rebuild																		
Bipole III Reduced Losses																		
5	Total Base Supply Power Resources	5 124	5 127	5 164	5 167	5 194	5 197	5 200	5 203	5 206	5 209	5 209	5 209	5 209	5 209	5 209	5 209	5 209
6	Total Power Resources 4+5	6 059	6 183	6 286	6 289	6 402	6 405	6 303	6 295	6 298	6 301	6 301	6 301	5 916	5 916	5 916	5 916	5 741
Peak Demand																		
2013 Base Load Forecast																		
Less: Level 2 DSM Forecast																		
7	Manitoba Net Load	4 601	4 680	4 742	4 801	4 857	4 930	5 002	5 074	5 147	5 222	5 296	5 369	5 443	5 516	5 588	5 664	5 739
Contracted Exports																		
Proposed Exports																		
8	Total Exports	605	605	358	358	358	358	358	633	880	880	880	880	385	385	275	275	275
9	Total Peak Demand 7+8	5 177	5 316	5 123	5 091	5 088	5 092	5 127	5 390	5 569	5 611	5 658	5 704	5 257	5 303	5 239	5 295	5 406
10	Reserves	483	505	551	547	547	547	551	556	563	568	573	579	585	590	596	602	609
11	System Surplus/(Deficit) 6-9-10	399	362	612	651	767	766	715	979	796	752	700	648	704	653	711	649	586
12	Less: Brandon Unit 5	- 105	- 105	- 105	- 105	- 105	- 105											
	Exportable Surplus 11+12	294	257	507	546	662	661	715	979	796	752	700	648	704	653	711	649	586

Date: April 2014

System Firm Winter Peak Demand and Capacity Resources (MW) @ generation
NFAT 2013 Update
K19/C40/750 MW/DSM Level 2

Fiscal Year	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	
Power Resources																			
New Power Resources																			
New Hydro																			
Conawapa																			
Keyask																			
1	Total New Hydro	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630
New Thermal																			
SCGT																			
CCGT																			
2	Total New Thermal																		
New Imports																			
Contracted																			
Proposed																			
3	Total New Imports																		
4	Total New Power Resources 1+2+3	630	630	630	630	630	630	630	630	630	1 150	1 670	1 930	1 930	1 930	1 930	1 930	1 930	1 930
Base Supply Power Resources																			
Existing Hydro																			
Existing Thermal																			
Brandon Coal - Unit 5																			
Selkirk Gas																			
Brandon Units 6-7 SCGT																			
Contracted Imports																			
Proposed Imports																			
Pointe du Bois Rebuild																			
Bipole III Reduced Losses																			
5	Total Base Supply Power Resources	5 741	5 741	5 741	5 741	5 741	5 741	5 741	5 741	5 741	5 741	5 680	5 656	5 656	5 656	5 656	5 656	5 656	5 656
6	Total Power Resources 4+5	6 371	6 371	6 371	6 371	6 371	6 371	6 371	6 371	6 371	6 891	7 350	7 586	7 586	7 586	7 586	7 586	7 586	7 586
Peak Demand																			
2013 Base Load Forecast																			
Less: Level 2 DSM Forecast																			
7	Manitoba Net Load	5 185	5 239	5 294	5 348	5 402	5 457	5 514	5 571	5 630	5 690	5 749	5 809	5 882	5 955	6 028	6 100	6 173	6 246
Contracted Exports																			
Proposed Exports																			
8	Total Exports	275	275	275	275														
9	Total Peak Demand 7+8	5 460	5 514	5 569	5 623	5 402	5 457	5 514	5 571	5 630	5 690	5 749	5 809	5 882	5 955	6 028	6 100	6 173	6 246
10	Reserves	622	629	635	642	648	655	662	669	676	683	690	697	706	715	723	732	741	750
11	System Surplus/(Deficit) 6-9-10	289	228	167	106	321	259	195	131	65	518	911	1 080	998	916	835	754	672	590
12	Less: Brandon Unit 5																		
	Exportable Surplus 11+12	289	228	167	106	321	259	195	131	65	518	911	1 080	998	916	835	754	672	590

Date: April 2014

System Firm Energy Demand and Dependable Resources (GWh) @ generation
NFAT 2013 Update
K19/C40/750 MW/DSM Level 2

Fiscal Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Power Resources																		
New Power Resources																		
New Hydro																		
Conawapa																		
Keeyask							493	2 974	3 003	3 003	3 003	3 003	3 003	3 003	3 003	3 003	3 003	3 003
1 Total New Hydro							493	2 974	3 003	3 003	3 003	3 003	3 003	3 003	3 003	3 003	3 003	3 003
New Thermal																		
SCGT																		
CCGT																		
2 Total New Thermal																		
New Imports																		
Contracted								928	1 113	1 113	1 113	1 113	1 113	1 113	1 113	1 113	1 113	1 113
Proposed																		
3 Total New Imports								928	1 113	1 113	1 113	1 113	1 113	1 113	1 113	1 113	1 113	1 113
New Wind																		
5 Total New Power Resources 1+2+3+4							493	3 902	4 116	4 116	4 116	4 116	4 116	4 116	4 116	4 116	4 116	4 116
Base Supply Power Resources																		
Existing Hydro	21 914	21 912	21 911	21 899	21 888	21 880	21 862	21 854	21 846	21 838	21 838	21 828	21 818	21 818	21 808	21 798	21 798	21 788
Existing Thermal																		
Brandon Coal - Unit 5	811	811	811	811	811	811	592											
Selkirk Gas	953	953	953	953	953	953	953	953	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	2 354	2 354	2 354	2 354	2 354	2 354	2 354	2 354
Contracted Imports	2 705	1 949	1 549	1 639	1 639	1 639	1 639	1 639	1 639	1 639	1 639	1 639	271					
Proposed Imports		781	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	155
Hydro Adjustment	340	373	784	844	844	844	844	844	844	844	844	844	406	307	307	307	307	70
Market Purchases	363	338	583	493	493	493	493	957	1 050	1 050	1 050	1 050	2 364	2 606	2 222	2 174	2 209	2 861
Existing Wind	771	771	771	771	771	771	771	771	771	771	771	771	771	771	771	771	771	771
Pointe du Bois Rebuild																		60
Bipole III Reduced Losses					190	190	190	202	202	202	202	202	202	202	202	202	202	202
6 Total Base Supply Power Resources	30 211	30 242	30 652	30 700	30 879	30 871	30 634	30 510	30 595	30 587	30 587	30 577	30 075	29 947	29 553	29 495	29 530	29 214
7 Total Power Resources 5+6	30 211	30 242	30 652	30 700	30 879	30 871	31 127	34 412	34 711	34 703	34 703	34 693	34 191	34 063	33 669	33 611	33 646	33 330
Manitoba Domestic Load																		
2013 Base Load Forecast	25 239	25 676	26 013	26 322	26 606	27 003	27 398	27 789	28 197	28 605	29 013	29 418	29 822	30 225	30 625	31 041	31 453	31 863
Construction Power - Hydro	22	22	40	50	70	80	60	25						4	12	16	28	8
Less: Level 2 DSM Forecast	- 138	- 382	- 637	- 1 196	- 1 475	- 1 840	- 2 062	- 2 217	- 2 325	- 2 459	- 2 552	- 2 653	- 2 751	- 2 858	- 2 961	- 3 032	- 3 099	- 3 166
8 Manitoba Net Load	25 123	25 316	25 416	25 176	25 201	25 243	25 396	25 597	25 872	26 146	26 461	26 765	27 071	27 371	27 676	28 025	28 382	28 705
Contracted Exports	3 156	3 156	2 115	2 012	2 012	2 012	2 012	3 048	4 191	4 314	4 314	4 314	2 031	1 887	1 472	1 389	1 389	1 389
Proposed Exports		448	931	951	951	951	951	741	252	162	162	162	162	162	162	162	162	
Less: Adverse Water			- 309	- 370	- 370	- 370	- 370	- 370	- 489	- 513	- 513	- 513	- 85					
9 Total Net Exports	3 156	3 604	2 737	2 593	2 593	2 593	2 593	3 419	3 954	3 963	3 963	3 963	2 108	2 049	1 634	1 551	1 551	1 389
10 Total Energy Demand 8+9	28 279	28 920	28 153	27 769	27 794	27 836	27 989	29 016	29 826	30 109	30 424	30 728	29 179	29 420	29 310	29 576	29 933	30 094
11 System Surplus/(Deficit) 7-10	1 932	1 322	2 499	2 931	3 085	3 035	3 138	5 396	4 885	4 594	4 279	3 965	5 012	4 643	4 359	4 035	3 713	3 236
12 Less : Brandon Unit 5	- 811	- 811	- 811	- 811	- 811	- 811	- 592											
13 Adverse Water			- 309	- 370	- 370	- 370	- 370	- 370	- 489	- 513	- 513	- 513	- 85					
Exportable Surplus 11+12+13	1 121	511	1 379	1 750	1 904	1 854	2 176	5 026	4 396	4 081	3 766	3 452	4 927	4 643	4 359	4 035	3 713	3 236

