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2003-2004 Winter Assessment

NPCC/Québec

Transfer capability from Michigan to Ontario is expected to be reduced on occasion by about 150 MW until the end of February 2004 due to the forced outage of the B3N interconnection as the result of a tower failure. Transfers from Ontario to Michigan are not expected to be affected.

Interregional transmission transfer capability studies have been conducted to determine levels of external assistance that can be imported during the forecast 2003/2004 winter peak demand period. The study results are reflected in the FCITCs reported in Figure 2.

There are no unusual operating conditions, environmental constraints, or regulatory restrictions that are expected to affect the capacity availability anticipated for this winter. All known planned generator outages have been included in the adequacy assessment of the Independent Electricity Market Operator (IMO).

Hydro-Québec

Assuming typical winter peak conditions, Hydro-Québec's internal peak demand for winter 2003/2004 is expected to reach 34,550 MW. This forecast represents an increase of 5.3% as compared to the 2002/2003 winter forecast of 32,809 MW but is 439 MW less than the Québec all-time winter peak demand of 34,989 MW, which occurred on January 22, 2003. This all-time peak demand occurred after several consecutive days of extreme cold accompanied by high winds.

Hydro-Québec's energy requirements are largely met by hydro generating stations located on different river systems scattered over a large geographical territory, with the major plants backed by multi-year reservoirs. To cope with inflow variations, Hydro-Québec's system can rely on those multi-year reservoirs together with some other non-hydraulic sources, including fossil generation. Based on the level of current water reserves in Hydro-Québec's reservoirs and the availability of other non-hydraulic sources, Hydro-Québec generation availability will meet the energy reliability criterion throughout this winter operating period.

The new generating capacity to be added to the system for the winter operating season will come from the refurbishment of a unit at Outardes 3 hydro plant, for a 64 MW addition, and from the first unit, to be operated at 280 MW, of the Sainte-Marguerite 3 hydro plant. The second unit of the Sainte-Marguerite 3 hydro plant is expected to be commissioned later in the spring of 2004. Those two Sainte-Marguerite 3 generators were announced in the 2003 Summer Assessment, but their in-service dates have since been delayed.

The planning reserve requirement for the Québec control area for the winter 2003/2004 period is 3,475 MW. For the month of January, the capacity margin is expected to be only 2,926 MW, a shortfall of 550 MW. If the return of the 660 MW Gentilly 2 nuclear plant is delayed beyond late December 2003, that shortage could be further increased. The shortage would be dealt with through various possible actions, including purchases from neighboring systems, implementation of a new load management program for large industrial customers, or advancing the commissioning date for the second generating unit at Sainte-Marguerite 3 hydro plant to January of 2004.

The transmission reinforcement program that was initiated following the January 1998 ice storm is still progressing. The eastern 735 kV loop Des Cantons/Montérégie/Hertel will be in service by the end of December 2003. With this new line, transfer capability and voltage support in the Montréal-Québec area will be enhanced. In addition, the implementation of a new centralized load shedding scheme based on the voltage behavior of the main grid will be implemented on the system, thus improving system reliability for extreme events with a low probability of occurrence.

2003/04 Winter Assessment

Forecast Peak Demands and Capacity Resources

Region/Subregion:		NPCC/Québec	janv-04	févr-04
		déc-03		
Peak Demand in Megawatts				
1.	Internal Demand	32 372	34 550	32 686
2.	Standby Demand (If not included in Line 1)			
3.	Total Internal Demand (Line 1 + Line 2)*	32 372	34 550	32 686
4.	Load Management			
5.	Interruptible Demand	515	515	515
6.	Net Internal Demand (Line 3 - Line 4 - Line 5)*	31 857	34 035	32 171
Capacity Resources, Net, in Megawatts				
7.	Committed Resources	32 376	32 390	32 390
12.	Uncommitted Resources			
13.	Total Capacity (Line 7 + Line 12)*	32 376	32 390	32 390
14.	Inoperable Capacity	2 616	1 932	1 945
15.	Net Operable Capacity (Line 13 - Line 14)*	29 710	30 458	30 445
16.	Total Capacity Purchases	6 975	6 975	6 975
17.	Full Responsibility Purchases	6 975	6 975	6 975
18.	Total Capacity Sales	472	472	472
19.	Full Responsibility Sales	472	472	472
20.	Adjustment to Purchases and Sales			
21.	Net Capacity Resources (Line 15 + Line 16 - Line 18 + Line 20)*	36 213	36 961	36 948
22.	Available Capacity Margin (Line 21 - Line 6)*	4 356	2 926	4 777

* The totals in the blue rows are automatically calculated.