

18-MONTH OUTLOOK:

An Assessment of the Reliability of the Ontario Electricity System

From January 2007 to June 2008



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Executive Summary

More than 1,000 MW of additional generating capacity is expected to be installed in Ontario during the next 18 months. As a result, the Outlook for Ontario's supply-demand picture over the next 18 months remains generally positive, consistent with the most recent Outlooks produced each quarter by the Independent Electricity System Operator, IESO.

The new supply includes two gas-fired generating facilities that will make important contributions to maintaining reliability in and around the Greater Toronto Area. Phase One of the Goreway gas-fired generator (485 MW) is expected to come into service before the summer of 2007, and Phase One of the Portlands Energy Centre (250 MW) is planned to come into service before the summer of 2008.

With the recent completion of the Prince wind farm, Canada's largest, a total installed capacity of about 400 MW of wind generation is now contributing to the Ontario market. With another 200 MW of wind generation scheduled to come into service during the 18-Month study period, the contribution from this renewable resource continues to increase. The IESO recently initiated a stakeholder working group to ensure wind continues to be successfully integrated into the power system.

Under the Normal Weather demand scenario, with all of the planned generation additions, there are sufficient resources forecast within Ontario to meet expected requirements over much of the period covered in this Outlook. However there are conditions under which the system could be strained and Ontario would need to continue to rely on additional supplies from outside the province. This is particularly true under extreme weather conditions or if new facilities are delayed from coming into service as scheduled.

On the transmission network, all circuits are now available on the Ontario-Michigan interconnection with the recent return to service of the 230 kilovolt (kV) interconnection line between Scott Transformer Station near Sarnia and Bunce Creek in Michigan.

The completion date for work to address transmission limitations from the Niagara region into the Hamilton-Burlington area, the Queenston Flow West project, continues to be delayed. The limitations affect both the use of available Ontario generation and imports into the province, particularly during hot weather, high demand periods. The project will increase the capability of the transmission system connecting the Niagara River generation at Queenston to the grid in the Hamilton area by about 800 MW, and will permit increased imports from New York of at least 350 MW, and up to 800 MW depending on the load and generation dispatch in Ontario.

At the end of 2007, National Grid will retire the U.S. portion of the Niagara 25 Hz system, paving the way for the retirement of some supporting transmission facilities at the Sir Adam Beck 1 Generating Station in Ontario. This will leave two generating units and the frequency changer to supply the two remaining customers on this system. Retirement of the rest of the 25 Hz system at Niagara is planned for April 2009 or sooner. The IESO meets regularly with 25 Hz stakeholders to assess progress towards this objective.

While outside the Outlook period, of note is the recent agreement between Hydro One and TransÉnergie to build a 1,250 MW high voltage direct current interconnection between Ontario and Quebec.

The forecast for energy and peak demand is lower than in the previous Outlook. Throughout the fall energy demand has declined as consumption by electrically intense industry has declined. In addition, the Ontario Power Authority and Local Distribution Companies have introduced a number of conservation and demand response programs this year but the full impact of these programs has yet to be felt.

Weather corrected energy demand is expected to be 153.2 terawatt hours (TWh) for 2006 a drop of 1.0% from 2005. Energy demand is expected to grow to 155.1 TWh in 2007.

The following table summarizes the peak demands for the upcoming seasons under the different weather scenarios.

Season	Seasonal Normal Weather Peak (MW)	Extreme Weather Peak (MW)
Winter 2007	24,612	25,400
Summer 2007	25,658	27,464
Winter 2007-08	24,678	25,467

The Independent Electricity System Operator (IESO) regularly assesses the adequacy and reliability of Ontario's power system. This 18-Month Outlook provides the IESO assessment of the reliability of the power system from January, 2007 to June, 2008 utilizing the most up to date forecast information and taking into account experience gained from past operations.

This Outlook presents a redefined resource scenario, the Firm Resource Scenario, which replaces the Existing Resource Scenario. The previous Existing Resource Scenario is no longer presented, because it is considered too unlikely that none of the planned resources will come into service on their identified in-service dates. The Firm Resource Scenario includes all existing resources and those resource additions in which the IESO has very high confidence including resources that are expected to come into service within the first 3 months of the study period, and any resources that have already

started their commissioning activities. The Planned Resource Scenario assumptions are unchanged from previous Outlook reports.

The 18-Month Outlook is intended for operational planning purposes, and for the scheduling of generator outage plans. To avoid unacceptably low reserves, it is important to the overall operational planning process that participants adjust their maintenance activities to periods where available resources exceed requirements.

- End of Section -

Caution and Disclaimer

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1.0 Introduction

This Outlook covers the 18-month period from January 2007 to June 2008. It supersedes the report titled “An Assessment of the Reliability of the Ontario Electricity System from October 2006 to March 2008”, dated October 2, 2006.

The purpose of the 18-Month Outlook is:

- To advise market participants of the resource and transmission reliability of the Ontario electricity system;
- To assess potentially adverse conditions that might be avoided through adjustment or coordination of maintenance plans for generation and transmission equipment; and
- To report on initiatives that are being put in place to improve reliability within the 18-month timeframe of this Outlook.

The contents of this Outlook focus on the assessment of resource and transmission adequacy. Other supporting information and forecasts are contained separately in the following documents that are updated as required:

- “Ontario Demand Forecast from January 2007 to June 2008” (IESO_REP_0315) (found on the IESO web site at http://www.ieso.ca/imoweb/pubs/marketReports/18Month_ODF_2006dec.pdf)
 - Contains a detailed description of the peak and energy demand forecasts used in this Outlook.
- “Methodology to Perform Long Term Assessments” (IESO_REP_0266) (found on the IESO web site at http://www.ieso.ca/imoweb/pubs/marketReports/Methodology_RTAA_2006sep.pdf)
 - Contains information regarding the methodology used to perform the demand forecasts, resource adequacy assessments and transmission reliability assessments in this Outlook.
- “Ontario Transmission System” (IESO_REP_0265) (found on the IESO web site at http://www.ieso.ca/imoweb/pubs/marketReports/OntTxSystem_2006dec.pdf)
 - Provides specific details on the transmission system, including the major internal transmission interfaces and interconnections with neighbouring jurisdictions.

Readers are invited to provide comments on this Outlook report or to give suggestions as to the content of future reports. To do so, please contact us at:

- Toll Free: 1-888-448-7777
- Tel: 905-403-6900
- Fax: 905-403-6921
- E-mail: customer.relations@ieso.ca.

This Outlook presents an assessment of resource and transmission adequacy based on the stated assumptions, using the described methodology. Readers may envision other possible scenarios, recognizing the uncertainties associated with various input assumptions, and are encouraged to use their own judgment in considering possible future scenarios. The tables contained in the document can be downloaded from the Independent Electricity System Operator (IESO) web site in MS Excel format.

In addition to the comprehensive Outlook, the IESO generally publishes Interim Updates to the 18-Month Outlook during each month for which a full Outlook is not issued. These updates include a spreadsheet which reflects changes to Total Resources, Total Reductions in Resources, and Reserve Above Requirement values for the Planned Resource Scenario. The updates also include a summary of actual demand and forecast demand data. Similar to the full Outlooks, the Interim Updates are posted on the IESO web site. These updates provide Outlook information on a more frequent basis to allow market participants to better adjust their operational plans and outage schedules.

The reader should be aware that [Security and Adequacy Assessments](#) are published on the IESO web site on a weekly and daily basis that progressively supersedes information presented in this report.

- End of Section -

2.0 Updates to This Outlook

2.1 Changes to Demand Forecast

The demand models have been updated to include the actual demand, weather and economic experience through September. The economic outlook and weather scenarios have been updated based on the most recent data. The current state of the Ontario economy and the manner in which it evolves over the outlook horizon underlines the importance of further development of economic-electricity demand relationships.

Overall, the updated demand forecast is lower than the previous one largely due to weakness in some electrically intense sectors of the Ontario economy.

2.2 Updates to Resources

Since the previous Outlook report was published, there has been an increase of 95 MW in the total installed capacity connected to the IESO controlled grid. Prince II Wind Power Project (90 MW) and an upgrade (5 MW) to an existing nuclear unit make up this increase.

There have been updates to the generator outages submitted by market participants. For this Outlook, generation outage plans submitted to the IESO's Integrated Outage Management System (IOMS) as of November 27, 2006 were used.

The Existing Resource Scenario has been modified and renamed the Firm Resource Scenario. The changes are described in detail in Section 5.

2.3 Updates to Transmission Outlook

The list of transmission projects and planned and forced transmission outages have been updated from the previous 18-Month Outlook. For this Outlook, transmission outage plans submitted to the IOMS as of November 2, 2006 were used.

This outlook also presents a discussion of some of the transmission enhancements that are forecast to be in service within the outlook period as well as some transmission retirements.

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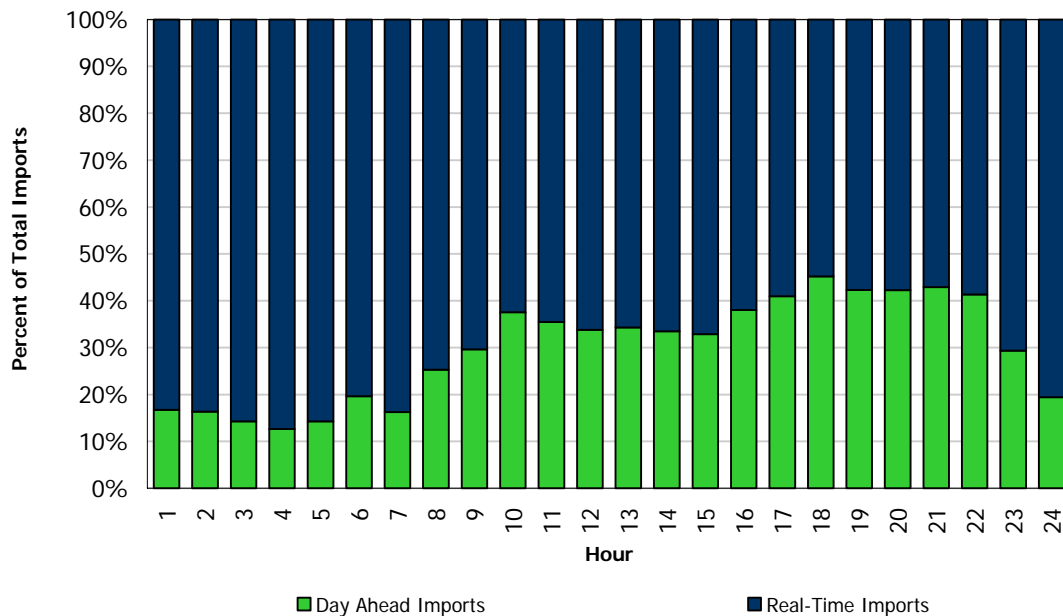
3.0 Historical Review

This section provides a review of past power system operation, including the most recent months of operation, to identify noteworthy observations, emerging problems and variations from forecast.

3.1 Reliability Program Contributions

The Day-Ahead Commitment Process (DACP) was introduced on June 1st, 2006 to commit internal resources and import transactions in advance of real-time in an effort to reduce transaction failures and provide certainty for internal and import resources. The process was initially created to address reliability concerns during peak summer months, however it has proven to be very effective at scheduling imports in the day-ahead timeframe when the Ontario electricity system is going through its peak generation outage period. Over peak periods between October 28 and November 24, 2006, as much as 45% of the total import volume was scheduled in the day-ahead timeframe. Figure 3.1 shows the contribution of day-ahead imports to meeting Ontario demand when internal generation resources were unavailable due to outages. During the period of October 28th to November 24th there was an average of 10,497 MW on outage, reaching a peak of 13,111 MW on November 11.

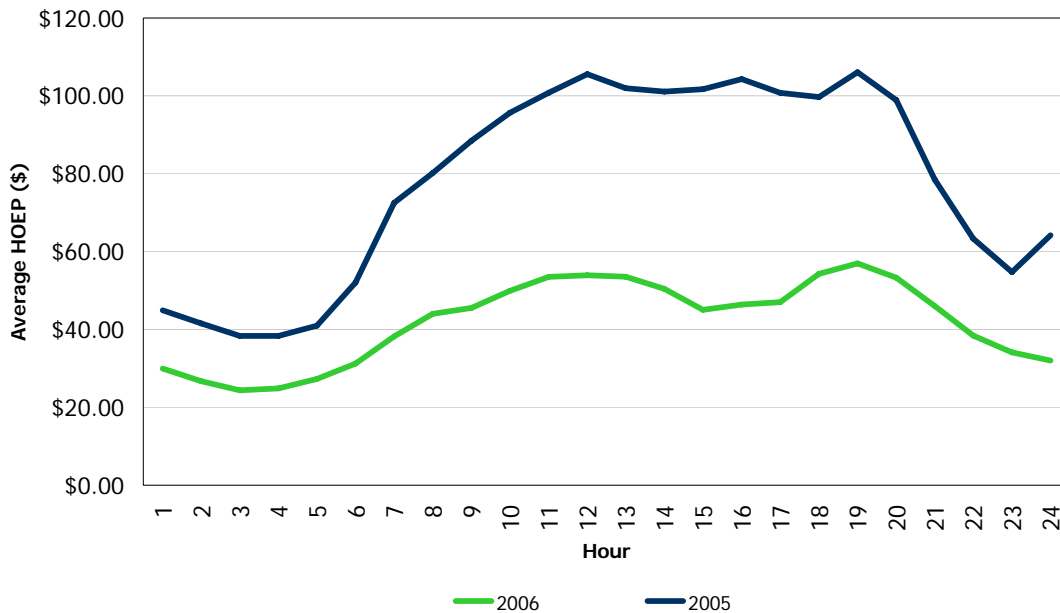
Figure 3.1 Contribution of Day-Ahead Imports to Total Import Volume between October 28 and November 24, 2006



3.2 Low Price Events

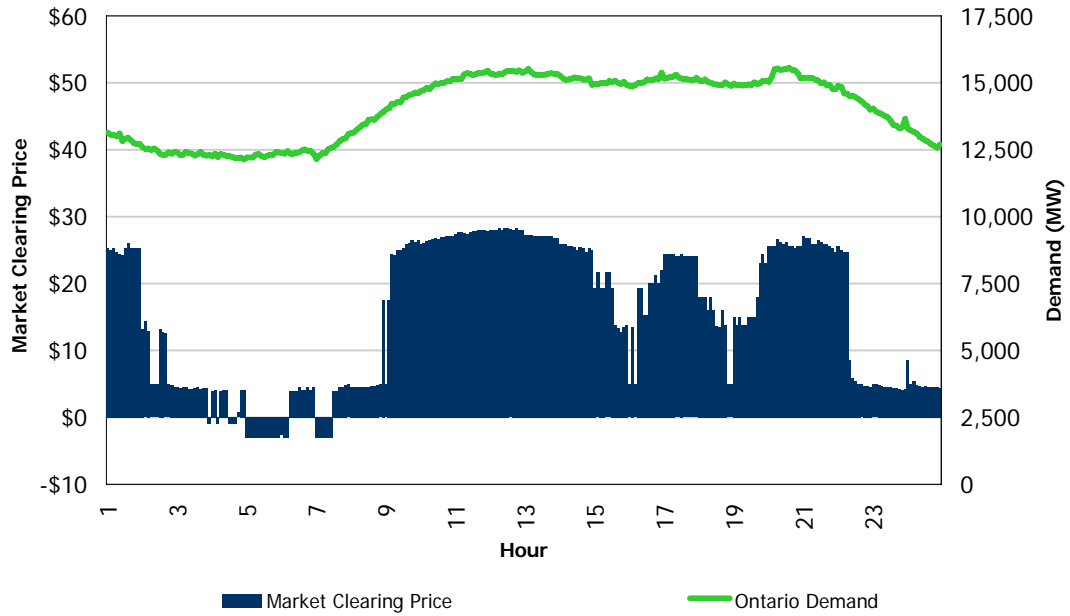
The lower demand profile in 2006, combined with a greater amount of available internal generation over 2005, also led to a decrease in the average hourly Ontario energy price (HOEP) between August 28 and November 24, 2006 when compared to the same period in 2005. The difference in the average HOEP over the study period was \$36.15. Figure 3.2 shows the difference between HOEP in 2005 and 2006.

Figure 3.2 Average Hourly Ontario Energy Price between August 28 and November 24, 2006



The most significant low-priced event during this period occurred in hour-ending 5 on September 3rd. For the first time since the opening of the electricity market in Ontario, the HOEP was negative. At the time, Ontario was exporting heavily to New York when a transmission circuit on the interface experienced a forced outage, thereby reducing the export limit on the interface. Due to the reduction in the export limit, a number of exports from Ontario were curtailed, meaning that the energy that was to be exported was available to meet demand within Ontario. However, sufficient base generation was already on-line to meet demand and the introduction of this energy resulted in the HOEP being negative as the new marginal resource had offered its energy at a negative price. This resource remained marginal for the entire hour. Figure 3.3 shows 5-minute market clearing prices (MCP) for all hours of September 3rd. The HOEP for hour-ending 5 settled at -\$3.10, meaning that generators paid \$3.10 for every megawatt-hour that they generated and loads were paid to consume.

Figure 3.3 Market Clearing Price for September 3, 2006



3.3 Weather and Demand Historical Review

The weather for September and October 2006 was cooler than normal but generally unremarkable. There was no day of severe weather and thus no significant peak demand.

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4.0 Demand Forecast

The forecast of demand has been updated to reflect the most recent economic, weather and demand information. The economic outlook has been updated and the same factors continue to dominate the story.

- Since 2003, the “high” dollar has had the potential to negatively impact Ontario’s export oriented industrial base. High commodity prices, driven by world demand, have forestalled most of this potential negative impact.
- However, sectors faced with lower commodity prices have not been able to avert the dollar impact. Margins have been further squeezed by higher oil prices. These sectors have experienced a reduction in electricity demand.
- Low interest rates continue to foster business investment and consumption. The consumption of goods and services will foster economic and electricity demand growth across a number of sectors of the Ontario economy throughout the forecast.
- Although the general economic outlook is similar to the previous forecast, the growth prospects vary by sector. Overall, the economic outlook for Ontario is continued growth throughout this forecast. However, the fact that this growth is not broad-based means that electricity demand will be shaped by the prospects of the large energy-intensive users.

The models have been adjusted and re-estimated to capture these developments. The adjustments include a number of items that were easily addressed in the short term. The economic drivers were revisited and refined. End-point adjustments were made to incorporate the latest zonal demand data.

The weather-corrected energy demand for 2006 is expected to be 1.1% lower than 2005 due largely to the reduction in energy-intensive industrial demand. Continued economic growth and better performance across all sectors of the economy will push energy demand up 1.3% in 2007 relative to 2006. The winter 2006-07 Monthly Normal peak demand is expected to be 24,407 MW. The Monthly Normal summer 2007 peak is expected to be 25,434 MW.

Demand Forecast Assumptions

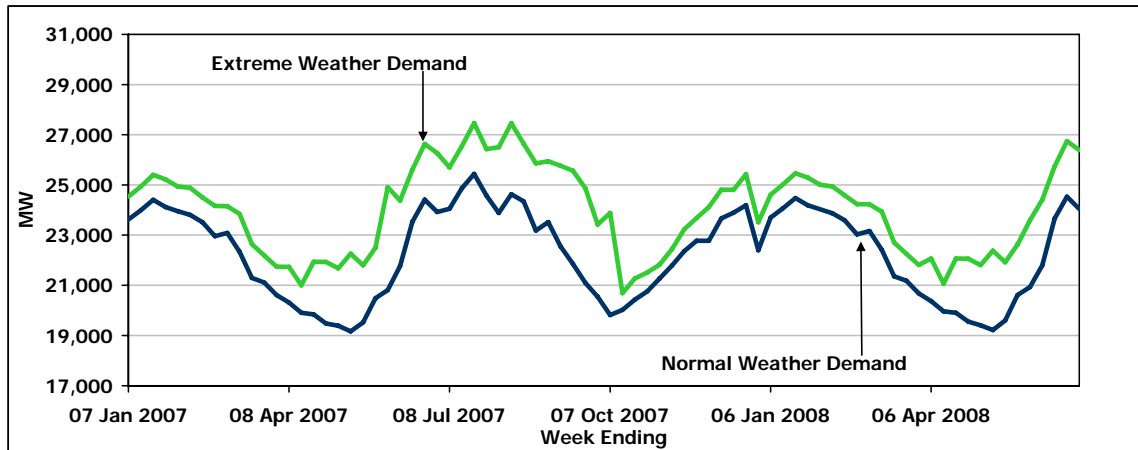
The adequacy assessments contained in this Outlook take into consideration a range of peak demands that can occur under various weather conditions with varying probability of occurrence. The IESO focuses on two demand forecast scenarios, which are based on:

- Monthly Normal weather; and
- Extreme weather.

The impact of varying weather is modeled probabilistically in the calculation of the required resources for each week of the study period.

Figure 4.1 shows the Monthly Normal and Extreme weather demands assumed for each week in the study period.

Figure 4.1 Demand Forecast Range



For purposes of identifying the peak demand that would be expected over a given season, the IESO produces a forecast based on Seasonal Normal weather. Daily, weekly and monthly peak demands are best represented by a demand forecast based on Monthly Normal weather. Therefore, the Monthly Normal weather demand forecast, combined with a measure of uncertainty due to variations in weather, is used for operational planning decisions. The peak demand forecast and the uncertainty surrounding it influence the amount of reserves required to maintain system reliability.

Demand values in the table are prior to any “demand measures” as they are treated as a resource in the reliability assessment. Demand measures include loads in the Dispatchable Loads, Transitional Demand Response and Hour Ahead Dispatchable Load programs. As well, demand measures include loads which have contracted with the Ontario Power Authority (OPA). It is reasonable to assume that some of these demand measures would reduce consumption in an extreme weather event.

Over time, there is a certain amount of natural conservation that occurs. Examples include less efficient appliances being replaced by more efficient ones, homes and buildings with better insulation replacing older structures and businesses altering their operations to reduce their exposure to higher electricity prices. These types of reductions are reflected in the IESO’s demand forecast.

Higher levels of conservation or demand management require more direct intervention in the form of incentives, standards or other mechanisms. The results of these initiatives can be substantial and will be included in future Outlooks as conservation and demand management programs are developed and implemented.

- End of Section -

5.0 Resource Adequacy Assessment

This section provides an assessment of the adequacy of resources to meet the forecast demand. In recognition of the uncertainty which exists regarding the future availability of resources, two resource scenarios are described in this section: the Firm Resource Scenario (FRS) and the Planned Resource Scenario (PRS).

The IESO assumes in the FRS that a limited set of planned resource additions will occur on their forecast in-service dates, whereas the PRS is developed on the assumption that all planned resource changes will occur within the 18-month study period.

The FRS excludes some planned resource changes while including others based on relative certainty levels for each event. The scenario assumes that uprates (or derates) to existing generation facilities will occur at their identified start time. In addition, it is assumed that resources that have started their commissioning activities and resources that are expected to become available in the first three months of the Outlook study period, will come into service at their identified start dates. However, the remaining planned additions which are not commissioning nor are due to come in-service in the next three months, are not considered in this scenario.

For both scenarios, all generating resources, once in-service or already in-service, are assumed to remain in-service for the duration of the study period, except for periods of time that the generator owner/operator has submitted planned outages for their generating units.

Results of the adequacy assessment, as well as an analysis of risk factors, are described in Sections 5.1 through 5.4. Observations, findings and conclusions are provided in Section 7, and detailed tables of results can be found in Appendix A of this document.

5.1 Planned Resource Scenario with Normal and Extreme Weather

Resource Assumptions

The Planned Resource Scenario assumes quantities of demand measures and generation capacity based on existing resources plus significant new generation facilities that are scheduled to come into service within the 18-month study period. These include:

- A. Existing Installed Resources: total capacity of 31,189 MW (refer to Table 5.1)
- B. New generation facilities and capacity changes to the existing facilities expected to be effective within the 18-month study period (refer to Table 5.2)
 - o Includes generation projects in the IESO's Connection Assessment and Approval Process (CAA)¹ that are under construction and projects contracted by the OPA.
 - o The estimated effective date shown in Table 5.2 indicates the date on which additional capacity is assumed to be available to meet Ontario demand. For projects that are under contract, the estimated effective date is the best estimate

¹ Details regarding the IESO's CAA process and the status of all projects in the CAA queue, including copies of available Preliminary Assessment and System Impact Assessment Reports, can be found on the IESO's web site www.ieso.ca under the "Participant Services - Connection Assessments" link.

of the date when the contract requires the additional capacity to be available. In the event that a project is delayed, such that the commercial in-service date is expected to be later than the contract date, the estimated effective date will be the best estimate of the commercial in-service date for the project.

C. Forecast of demand measures:

- Demand measures include loads in the Dispatchable Loads, Transitional Demand Response and Hour Ahead Dispatchable Load programs, as well as loads which have contracted with the OPA.
- Table 5.3 summarizes the changes to the capacity equivalent from demand measures over the course of the forecast.
- Demand measures ranges from 403 MW to a maximum of 434 MW (refer to column "Demand Measures" in Table A2 or A5 in Appendix A).
- Demand measures are forecasted based on market participant information and actual market experience.
- Based on historical data, it is assumed that 55.3% of dispatchable demand is available at the time of the weekly peak.
- The Transitional Demand Response Program is assumed to end the week ending April 1, 2007. Like dispatchable demand, only a portion of the total is expected to be available at the time of the weekly peak.

Table 5.1 Existing Installed Generation Resources

Fuel Type	Total Capacity (MW)	Number of Stations
Nuclear	11,419	5
Hydroelectric	7,768	68
Coal	6,434	4
Oil / Gas	5,103	22
Wind	395	4
Biomass / Landfill Gas	70	4
Total	31,189	107

Table 5.2 Committed and Contracted Generation Resources

Proponent/Project Name	Zone	Fuel Type	Capacity MW	Estimated Effective Date	Considered in Resource Scenario	
					FRS	PRS
Abitibi Canyon Runner Upgrade	Northeast	Water	20	2007-Q1 ⁽²⁾	Yes	Yes
Trail Road Landfill Gas	Ottawa	Landfill Gas	5	2007-Q1 ⁽¹⁾	Yes	Yes
Goreway Station Phase 1	Toronto	Gas	485	2007-Q2 ⁽¹⁾		Yes
Nuclear Upgrade	N/A	Uranium	27	2007-Q3 ⁽¹⁾	Yes	Yes
Ripley Wind Power Project	Southwest	Wind	76	2007-Q4 ⁽¹⁾		Yes
Lac Seul Project - English River	Northwest	Water	13	2007-Q4 ⁽²⁾		Yes
Abitibi Canyon Runner Upgrade	Northeast	Water	10	2008-Q1 ⁽²⁾	Yes	Yes
Great Northern Tri-Gen	West	Gas	12	2008-Q1 ⁽³⁾		Yes
Umbata Falls Hydroelectric	Northwest	Water	23	2008-Q2 ⁽⁴⁾		Yes
Durham College District Energy	Toronto	Gas	2	2008-Q2 ⁽³⁾		Yes
Portland Energy Centre Phase I	Toronto	Gas	250	2008-Q2 ⁽⁴⁾		Yes
Countryside London Cogen	West	Gas	12	2008-Q2 ⁽³⁾		Yes
Warden Energy Centre	Toronto	Gas	5	2008-Q2 ⁽³⁾		Yes
Melancthon II Wind Project	Southwest	Wind	132	2008-Q2 ⁽⁴⁾		Yes
Total			1,071			

Notes to Table 5.2:

The total may not add up due to rounding. Some projects that appeared in the table in the last Outlook may not appear in the above table due to the Estimated Effective Date being beyond the period covered by the Outlook.

- (1). The Estimated Effective Date for the project hasn't changed from the last Outlook.
- (2). The project was not included in the last Outlook.
- (3). Combined heat and power (CHP) project contracted by OPA in October 2006 is included in this Outlook. It is assumed that the CHP project will be registered to participate in the market. If it doesn't appropriate adjustment will be made to the Ontario demand forecast.
- (4). The project is planned to come into service in the additional three months covered by this Outlook.

Table 5.3 Demand Side Projects

Project	Type	Zone	Capacity MW	Estimated Effective Date
Transitional Demand Response Program	Dispatchable Demand	Distributed	-57	2007-Q2
Demand Response	Dispatchable Demand	Northeast	5	2007-Q2
Total			-52	

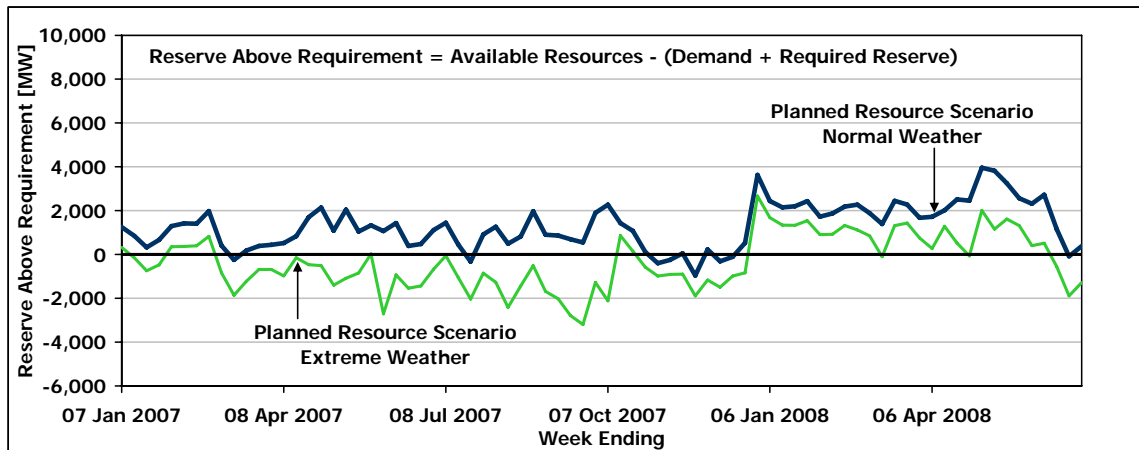
With respect to forecasts of generation capabilities, the assumptions are as follows:

- Hydroelectric capability based on median historical values of hydroelectric production and contribution to operating reserve during weekday peak demand hours
- Capacity and energy contributions from thermal generators based on market participant submissions, including planned outages, expected forced outage rates and seasonal deratings
- Capacity at the time of weekday peak and total energy contributions from wind-powered generation assumed to be 10% and 30%, respectively

Weekly Adequacy Assessments

Reserve Above Requirement levels, which represent the difference between Available Resources and Required Resources, are shown in Figure 5.1.

Figure 5.1 Reserve Above Requirement: Planned Resource Scenario with Normal vs. Extreme Weather



5.2 Firm Resource Scenario with Normal and Extreme Weather

Resource Assumptions

The Firm Resource Scenario assumes quantities of demand measures and generation capacity based on the existing resources and a limited set of planned capacity increases or additions. This scenario includes:

- Existing Installed Resources: total capacity of 31,189 MW (refer to Table 5.1)
- Capacity increase to the existing facilities expected to be effective within the 18-month study period (refer to Table 5.2, items which indicate “upgrade”).
- Additional generating resources that have started their commissioning activities with contributions beginning on the date that the facility is expected to be in-service (refer to Table 5.2, column which indicates “Considered in Resource Scenario”).
- Additional generating resources that are expected to become available in the first three months of the Outlook study period (regardless of commissioning status) will be included, with contributions beginning on the date that the facility is expected to be in-service (refer to Table 5.2, column which indicates “Considered in Resource Scenario”).

E. Forecast of demand measures:

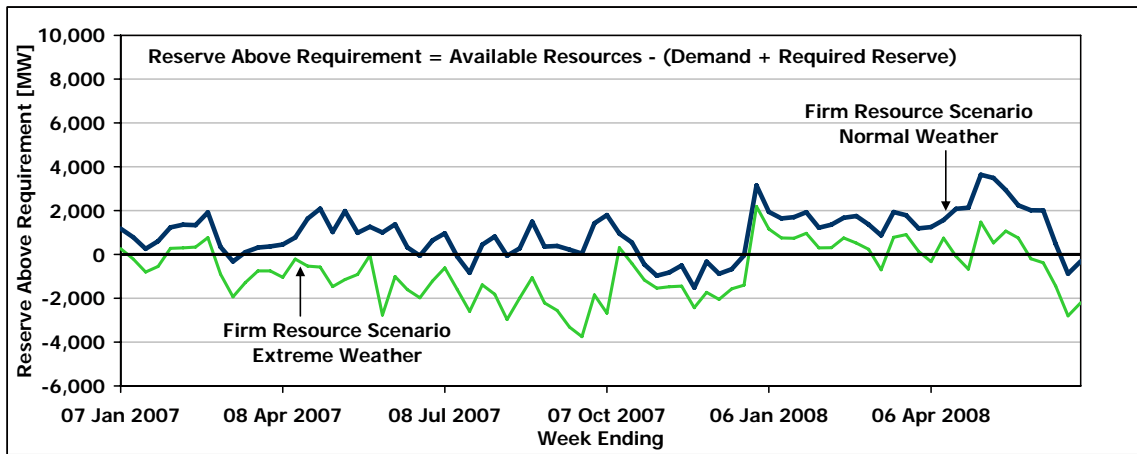
- o 368 MW of demand measures capability up until week ending April 1, 2007 and 342 MW for the remainder of the period (refer to column “Demand Measures” in Table A1 or A4 in Appendix A).

With respect to forecasts of generation capabilities, the Firm Resource Scenario is based on the same assumptions as the Planned Resource Scenario.

Weekly Adequacy Assessments

Reserve Above Requirement levels, which represent the difference between Available Resources and Required Resources, are shown in Figure 5.2.

Figure 5.2 Reserve Above Requirement: Firm Resource Scenario with Normal vs. Extreme Weather



5.3 Comparison of Resource Scenarios

Table 5.4 shows a snapshot of the forecast available resources, under the two scenarios, at the time of the seasonal peak demands over the study period.

The monthly forecast of energy production capability, as provided by market participants, is included in Appendix A, Table A6.

Table 5.4 Summary of Available Resources

Notes	Description \ Year	Winter Peak 2007		Summer Peak 2007		Winter Peak 2008	
		Firm Resource Scenario	Planned Resource Scenario	Firm Resource Scenario	Planned Resource Scenario	Firm Resource Scenario	Planned Resource Scenario
1	Installed Resources (MW)	31,209	31,209	31,214	31,699	31,251	31,825
2	Imports (MW)	0	0	0	0	0	0
3	Total Resources (MW)	31,209	31,209	31,214	31,699	31,251	31,825
4	Total Reductions in Resources (MW)	3,517	3,517	2,885	2,914	2,127	2,188
5	Demand Measures (MW)	368	434	342	406	342	406
6	Available Resources (MW)	28,060	28,126	28,671	29,191	29,466	30,042

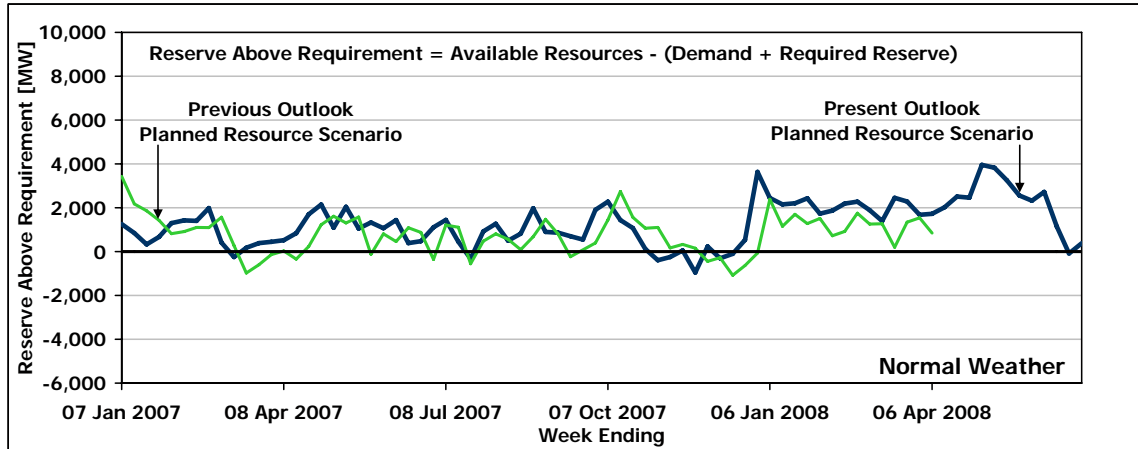
Notes to Table 5.4:

1. Installed Resources (MW): This is the total capacity of the generation resources in Ontario assumed to be installed at the time of the summer and winter peaks in the 18 month time span. Initially, this value includes all generators registered to participate in the IESO-administered markets at the beginning of the 18 month study period. Additional generation capacity that was assumed under the applicable resource scenario is progressively included, according to the estimated in-service dates.
2. Imports (MW): Represents the amount of external capacity considered to be delivered to Ontario.
3. Total Resources (MW): This is the sum of Installed Resources (line 1) and Imports (line 2).
4. Total Reductions in Resources (MW): These reductions represent the sum of generator deratings, generator planned outages, generation limitations due to transmission interface constraints, generation constraints due to transmission outages/limitations and allowance for generation capability levels below rated installed capacity.
5. Demand Measures: This is the amount of demand assumed available to be reduced, under each resource scenario.
6. Available Resources (MW): This equals Total Resources (line 3) minus Total Reductions in Resources (line 4) plus Demand Measures (line 5).

Weekly Adequacy Assessments

Figure 5.3 provides a comparison between the forecast Reserve Above Requirement values in the present Outlook and the forecast Reserve Above Requirement values in the previous Outlook published on October 2, 2006.

Figure 5.3 Reserve Above Requirement: Planned Resource Scenario with Present Outlook vs. Previous Outlook



5.4 Resource Adequacy Risks

The forecast reserve levels for both the Firm Resource Scenario and the Planned Resource Scenario should be assessed bearing in mind the risks discussed below.

5.4.1 Extreme Weather

The Firm Resource Scenario and the Planned Resource Scenario are based on the assumption of normal (average) weather. However, peak demands in both summer and winter typically occur during periods of extreme weather. Unfortunately, the occurrence and timing of extreme weather is impossible to accurately forecast far in advance. As a result, the impact of extreme weather is modeled probabilistically in the calculation of the required resources for each week of the study period. The impact of extreme weather was demonstrated in the first week of August 2006, when Ontario established an all-time record demand of 27,005 MW. Over 3,000 MW of this demand was due to the higher than average heat and humidity.

In order to illustrate the impact of extreme weather on forecast reserve levels during the Outlook period, both the Firm Resource Scenario and the Planned Resource Scenario were re-calculated assuming extreme weather in each week instead of normal weather. The probability of this occurring in every week is very small; however the probability of an occurrence in any given week is greater (about 2.5 percent). Over the course of the Outlook period (18-Months) you will observe at least one day of extreme weather. When one looks at the entire summer or winter periods, the expectation of at least one period of extreme weather becomes very likely.

The magnitude of resource deficiencies, under extreme weather, clearly illustrates there are circumstances under which reliance on interconnected supply is likely. This emphasizes the continued need for reliable supply and demand response within Ontario.

5.4.2 New Resource Risks

For the 18 month period under study, the improved demand-supply situation mainly for the Planned Resource Scenario is dependent on the additional generation and demand measures coming into service as forecast. Given the amount of new supply and transmission enhancements required in such a short period of time, timely regulatory approvals processes are required. Serious consideration needs to be given to developing expedited, but thorough, approvals processes to ensure timely completion of the new facilities.

5.4.3 Extensions to Generator Planned Outages

A number of large generating units are scheduled to return to service from outage prior to winters 2006/2007 and 2007/2008 and summer 2007. Meeting these schedules is critical to maintaining adequate reserve levels. Delays in returning generators to service from maintenance outages could lead to reliance on imports and/or cancellation of planned generator outages.

In the event that generator outages must be delayed due to reliability concerns, it will be necessary for outages to be rescheduled to a more suitable time period. However outage rescheduling could stretch the ability of generator owners/operators to accommodate larger amounts of outages over shorter time periods and may increase forced outage occurrences. Operational experience so far indicates generator owners are usually able to adapt their outage plans. However, the dual peaking nature of the Ontario system (roughly equivalent peaks in winter and summer) means that outages must be scheduled in shorter spring and fall periods. Inevitably this means that some long duration outages have to be scheduled into the start of the peak seasons, creating the potential that any extensions of these outages occur when the generation is most needed.

5.4.4 Higher than Forecast Generator Unavailability

IESO resource adequacy assessments include a probabilistic allowance for random generator forced outages based on generator reliability information provided by market participants, or on industry-wide data for similar facilities. Along with weather-related demand impacts, the impact of generator forced outages is included in the determination of required resources.

5.4.5 Lower than Forecast Hydroelectric Resources

IESO resource adequacy assessments include hydroelectric generation outputs based on median historical values of hydroelectric production plus operating reserve during weekday peak demand hours and energy capability provided by market participants. The amount of available hydroelectric generation is greatly influenced both by water-flow conditions on the respective river systems and by the way in which water is utilized.

Water-flow conditions are primarily influenced by the amount of precipitation received. To accurately forecast precipitation amounts far in advance is little better than chance. Drought conditions over some or all of the study period would lower the amount of generation available from hydroelectric resources. Low water conditions can result in significant challenges to maintaining reliability, such as the reliability challenges of the summer of 2005.

5.4.6 Wind Resource Risks

Wind generator output varies on a continuous basis due to the variability of wind. This Outlook assumes that 10% of the installed capacity of wind power generators is available at the time of the weekly peak. There is a risk that wind power output could be less than 10% at the time of the weekly peak if:

- the wind isn't blowing, or
- extreme cold weather or wind speeds necessitate that wind generator output be curtailed to prevent equipment damage.

The geographic diversity of Ontario wind resources would mitigate some of the risk associated with wind speed variability.

General Electric published the Ontario Wind Integration Study report in October 2006. This study was jointly commissioned by the Canadian Wind Energy Association, the IESO and the OPA to assess the implications of large scale wind integration into the Ontario power system. IESO is currently engaging the stakeholders in the Wind Power Integration Working Group. The assumed capacity factor at the time of the peak is expected to change at the end of this stakeholdering process.

5.4.7 Capacity Limitations

There is a risk that any given generator may not be capable of producing the maximum capacity that the market participant has forecast to be available at the time of peak demand. There may be several reasons for these differences.

Forecast models include an equivalent forced outage rate, that is intended to capture the random nature of generator capacity limitations, deratings, and forced outages. There is a risk that actual outages and deratings may be higher than forecast, and there is also a risk that certain types of deratings or outages may not be completely random. Some outages and deratings, such as environmental limitations, may be more likely to occur at roughly the same time as the extreme weather conditions which drive peaks in demand.

In addition, the forecast models assume that the maximum capacity of any given generator may be utilized fully at the time of the Ontario peak demand, although there are risks that the maximum capability of all generating resources may not be available in the same peak hour, due to interrelationships between generating resource fuel availability.

5.4.8 Transmission Constraining Resource Utilization

There is a risk that transmission constraints occur more often than expected, or have greater impact than expected on the ability to deliver generation to load centres. A limited number of transmission limitations are modeled without all probabilities of failure included. There is a risk that certain transmission limitations, which are not modeled, may have a greater impact than forecast and/or failures could occur to significantly impact the utilization of resources, until such equipment is repaired or replaced. There is also a risk that these limitations may not be due to completely random outages but can occur under the same conditions which create high demand. For example during periods of time when there is little wind, hot weather results in reduced transmission limits. This can affect the utilization of internal generation and imports from neighbouring systems.

5.4.9 Failure of Import Transactions

There is a risk that import transactions scheduled with neighbouring markets fail to be delivered. These failures represent expected supply that is suddenly not available in real-time. The failures are especially problematic due to the timing and size of the failures. The implementation of the Day Ahead Commitment Process since June 2006 provides more certainty that these imports will be delivered in real-time.

- End of Section -

6.0 Transmission Reliability Assessment

This section provides an assessment of the reliability of the Ontario transmission system.

6.1 Transmission Projects

The IESO relies on the transmitters to provide information on the transmission projects that are planned for completion within the 18 months period under study. The complete list of major transmission projects is shown in Appendix B. The list includes only the transmission projects that are considered to provide significant improvement to the system reliability but does not include transmission equipment replacements or refurbishments. For the projects that applied for the Connection Assessment and Approval process the assigned identification number is included for cross referencing.

Additional information regarding the transmission projects that have been assessed by the IESO can be found at the IESO's Connection Assessments web page, at the following location:

<http://www.ieso.ca/imoweb/connAssess/ca.asp>.

6.2 Planned Transmission Outages

A principal purpose of the transmission reliability assessment is to forecast any reduction in transmission capacity brought about by specific transmission outages. For a major transmission interface or interconnection, the reduction in transmission capacity due to an outage condition can be expressed as a change in the base flow limit associated with the interface or interconnection.

Another purpose of the transmission reliability assessment is to identify the possibility of any security related events on the IESO controlled grid that could require contingency planning by market participants or by the IESO. As a result, the transmission outages are reviewed to identify transmission system reliability concerns and to highlight those outages that should be rescheduled or changed. As an example, a change to an outage may include reducing the scheduled duration or recall time.

The assessment of transmission outages will also identify any resources that have potential or are forecast to be constrained due to transmission outage conditions. The identification of a constrained resource is generally not reflected in the assessment of weekly resource adequacy, which is detailed in Section 5.1, since there is typically sufficient outage scheduling flexibility to avoid constraining off resources when such resources are needed for reliability. Transmitters and generators are expected to have a mutual interest in developing an ongoing arrangement to coordinate their outage planning activities. Transmission outages that may affect generation access to the IESO controlled grid should be coordinated with the generator operators involved, especially at times when the forecast of reserve is deficient. Under the Market Rules, where the scheduling of planned outages by different market participants conflicts such that both or all outages cannot be approved by the IESO, the IESO will inform the affected market participants and request that they resolve the conflict. If the conflict remains unresolved, the IESO will determine which of the planned outages can be approved according to the priority of each planned outage as determined by the Market Rules detailed in Chapter 5, Sections 6.4.13 to 6.4.18.

For this Outlook, transmission outage plans submitted to the IESO's Integrated Outage Management System (IOMS) as of November 2, 2006 were used.

The IESO's assessment of the impact of the transmission outage plans is shown in Appendix C, Tables C1 to C10. In these tables, each element is assessed individually by indicating the possible impacts and the reduction in transmission interface and/or interconnection limits. Where multiple outages are scheduled during the same period, the combined effect of all outages on the reduction in transmission interface and/or interconnection limits is presented. The methodology used to assess the transmission outage plans is described in the IESO document titled "Methodology to Perform Long Term Assessments" (IESO_REP_0266).

A number of the transmission outages planned within the timeframe of this Outlook are judged to have a material impact on the overall reliability of the IESO controlled grid as indicated in Appendix C. Specifically, the multiple outages related to Lambton and Sarnia-Scott station reconfigurations and refurbishments scheduled for the spring and fall of 2007 will result in a significant reduction in FABC limit, BLIP limit and NBLIP limit. Most of these outages are not recallable. An assessment of the scheduled generation outages in conjunction with the transmission outages and the projected capability of the inter-ties shows that transmission system will be adequate to supply the load forecast for the Outlook period.

The assessment of transmission outages for this Outlook has been limited to those outages with a scheduled duration of greater than five days or to those outages associated with a project where there is a significant collection of outages which have a combined scheduled duration of greater than five days. The IESO recognizes that there are expected to be additional outage requirements and/or changes as time approaches the Outlook study period and that transmission capacity will be impacted by outages with a scheduled duration of five days or less. Prior to approving and releasing an outage, the IESO will reassess the outage for potential system impacts, taking into account all current and forecasted conditions.

The large number of system changes identified to be completed in this 18 Month assessment will require a substantial number of planned outages to incorporate the new facilities.

6.3 Adequacy of the Existing Transmission System

The Ontario transmission system is expected to be adequate to supply the coming summer's demand under the forecast conditions.

Previous IESO Outlooks identified various areas of the IESO controlled grid where the projected extreme weather loading is expected to approach or exceed the capability of the transmission facilities in the planning period. This could result in congestion of low priced resources that must be replaced by higher priced resources, and would increase costs to market loads. Where the loading was projected to exceed the capability of the transmission facilities, there is also an increased risk of load interruptions.

IESO continues to work with Hydro One and other Ontario transmitters, to identify the highest priority transmission needs, and to ensure that those projects whose in service dates are at risk are given as much priority as is practical, especially those addressing reliability needs for summer 2007. IESO has also been working closely with the Ontario Power Authority to specify the locations, timing and minimum generation requirements to satisfy reliability standards.

For summer 2007, the following areas of the grid are expected to be improved over last summer, and to provide an increased level of reliability.

6.3.1 City of Toronto and Western GTA

For the summer peak forecast conditions the projected power flows over the Trafalgar autotransformers and Middleport autotransformers are approaching but not exceeding the maximum station capability.

The recent replacement of a Cherrywood transformer which had been derated will further enhance the load supply to central Toronto well before the summer 2007 peak period.

For some hours in summer 2006, although less frequently than 2005, the Claireville Transformer Station (TS) autotransformers were loaded above their continuous ratings, relying on their long term emergency ratings to supply the demand in the western GTA. Timely completion of the Goreway Station Phase One will reduce the loading on these autotransformers in summer 2007, and reduce the risk of overloading in the event of a long term failure of one of these autotransformers.

To connect the Portlands Energy Centre into the Hearn switching station will require extensive equipment outages in the period before summer 2008. Two cables supplying the downtown Toronto that were out of service as part of this work are schedule to return to service in the first week of December 2006.

Completion by Hydro One of the John TS to Esplanade TS link by the fall of 2007 will also enhance supply reliability to central Toronto by increasing the capability to transfer some loads from their normal supply east of the city, to an alternate supply from the west, and vice versa.

6.3.2 Beck-Middleport-Hamilton/Burlington circuits (QFW)

The completion date for work to address transmission limitations from the Niagara region into the Hamilton-Burlington area, the Queenston Flow West project, continues to be delayed. The limitations affect both the use of available Ontario generation and imports into the province, particularly during hot weather, high demand periods.

Once in service it will increase the capability of the transmission system connecting the Niagara River generation at Queenston to the grid in the Hamilton area by about 800 MW. This enhancement will also permit increased imports from New York of at least 350 MW, and up to 800 MW depending on the load and generation dispatch in Ontario.

6.3.3 St. Lawrence to Hinchinbrooke and Ottawa Area

Summer 2005 operation exhibited very heavy loading on the 230 kV circuits westward from St. Lawrence TS to Hinchinbrooke TS. An existing Special Protection System (SPS) at St. Lawrence was modified for summer 2006, allowing increased westward transfers. This SPS is planned to be enhanced further, to increase its functionality and reliability under peak load conditions, and to maximize simultaneous import capability from Hydro Quebec and New York.

Hydro One and TransÉnergie have signed an agreement to build a high voltage direct current (HVDC) interconnection between Hawthorne TS in Ontario and Outouais station in Quebec with a capacity of 1250 MW. Although the project is not scheduled for in service in the timeframe of this Outlook and transmission outages have not yet been scheduled it is expected that in the near future extensive transmission work related to the project will commence.

The IESO entered into a Reliability Must Run Contract with OPG for Lennox GS following a request to deregister the Lennox station. Studies performed by the IESO indicated that there could be significant adverse local area reliability impacts if Lennox is removed from the IESO-controlled grid and the IESO-administered markets without adequate replacement resources or mechanisms.

6.3.4 Lambton-Sarnia Generation

To prepare the power system to reliably incorporate additional generation facilities around the Lambton area, including the St. Clair Power and Greenfield Energy Centre, extensive work needs to be completed at the Lambton switchyard. The modifications are required to connect the new generation facilities and to manage the expected increase in short circuit levels when new generation facilities at St. Clair Power and Greenfield Energy Centre begin their commissioning activities while generating units at Lambton continue to operate. To complete the work on time, a large volume of equipment outages must proceed as scheduled.

Examination of outages in this area have revealed several days when transmission work requires specific Lambton generating units to be off line, thus reducing the available generation to supply Ontario demand. Specific transmission outages that are expected to materially restrict Lambton generation have been reflected in lower availability of Lambton generation. The Reserve Above Requirement values will also be lower, as a result.

6.3.5 Michigan Interconnection

Phase angle regulators (PARs) are installed on the Michigan Ontario interconnection but are not available to regulate flows except in emergencies, pending agreement by the International Transmission Company in Michigan to permit full regulation.

The inability to regulate flows combined with limiting ratings on the PAR equipment can result in significant congestion of imports from Michigan. This was experienced in summer 2005. Before summer 2006, the IESO, the Midwest ISO, Hydro One and International Transmission Company, agreed to temporarily bypass the phase angle regulators for normal operation until an agreement is reached to make full use of their regulating capability. Bypassing the PARs increases Ontario's transfer capability to and from Michigan by 300 to 350 MW in the summer and by about 400 MW in the winter.

Full regulating capability on the Michigan interface combined with increased import capability from the Niagara direction following completion of the Niagara expansion project, will provide a significant increase in the combined import capability from New York and Michigan.

The 230 kV interconnection line, B3N, between Scott TS in Ontario and Bunce Creek in Michigan was recently returned to service thus restoring the Michigan Ontario interconnection to its full capability under the current configuration with the PARs bypassed.

6.3.6 Great Lakes Power Transmission Expansion

In June of 2006, GLP's Wawa to Third Line 230 kV circuit was completed. The addition of this circuit has increased the transfer capability eastward from Wawa, has unbottled Brookfield generation in the vicinity of Wawa TS, and has increased the reliability of supply to Sault St. Marie by providing a third 230 kV transmission circuit into the city. The new circuit also

serves as the connection point for both phases of the Prince Wind Project. The increase in available generation resources resulting from these transmission enhancements has led to congestion on the transmission system east of Sault St. Marie. The IESO will be reviewing the existing operating limits in that area and initiating operating measures to reduce congestion to the extent possible.

6.3.7 Niagara 25 Hz System

At the end of 2007, National Grid, a transmission entity in the United States, will retire the US portion of the Niagara 25 Hz system, reducing 25 Hz load served from Ontario paving the way for the retirement of some supporting transmission facilities at the Sir Adam Beck 1 Generating Station. This will leave two generating units and the frequency changer to supply the two remaining customers on this system. Retirement of the rest of the 25 Hz system at Niagara is planned for April 2009 or sooner. The IESO meets regularly with 25 Hz stakeholders to assess progress towards this objective

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7.0 Conclusions

The following conclusions are based on the results of the assessment carried out for this Outlook.

Resource Adequacy

- Under the Planned Resource-Normal Weather Scenario, forecast reserves within Ontario are sufficient to meet requirements for 70 of 78 Weeks in the study period. Reserves are forecast to be below requirements for eight weeks of the Outlook timeframe. Where this situation occurs, Ontario may need to rely on external supplies. During other periods where planned maintenance is the most significant contributor to lower reserves, some planned generator outages are at risk of cancellation by the IESO, for reliability reasons, depending on their priority and the resource adequacy situation at the time their approval is being sought. Opportunities will exist for additional planned generator maintenance and exports in the other weeks of the Outlook period where reserves exceed requirements.
- Under the Firm Resource-Normal Weather Scenario, the reserves are forecast to be below requirements for 16 weeks of the Outlook timeframe.
- Extreme weather during the peak periods will result in significantly increased reliance on imports to supplement Ontario generation and higher potential for use of emergency operating procedures.
- Results of the resource adequacy assessment are summarized in the matrix below. The different shadings are intended to suggest the degree of concern regarding the supply/demand situation under each resource-weather scenario combination.

	Normal Weather Scenario	Extreme Weather Scenario
Planned Resource Scenario	<ul style="list-style-type: none"> - there are eight weeks when reserves are lower than required (planned outages at risk or imports potentially required) - opportunities for additional outages/exports exist in most other weeks 	<ul style="list-style-type: none"> - many planned outages at risk - imports required during some peak periods - higher risk of requiring emergency operating procedures up to and including rotational load shedding
Firm Resource Scenario	<ul style="list-style-type: none"> - there are 16 weeks when reserves are lower than required (planned outages at risk or imports potentially required) - opportunities for additional outages/exports exist in many other weeks 	<ul style="list-style-type: none"> - many planned outages at risk - imports required during some peak periods - higher risk of requiring emergency operating procedures up to and including rotational load shedding

- The magnitude of resource deficiencies under both normal and extreme weather emphasizes the continued need for additions of reliable supply, conservation and demand response within Ontario.

- For the 18 month period under study, the improved demand-supply situation for the Planned Resource Scenario is dependent on the additional generation and demand measures coming into the market as forecast.
- A number of large generating units are scheduled to return to service from outage prior to the winters 2006/2007 and 2007/2008 and summer 2007. Meeting these planned outage schedules is critical to maintaining adequate reserve levels over the peak seasons.
- High generator unavailability, whether caused by higher forced outage rates or delays in returning generators to service, could lead to greater reliance on imports. Under these circumstances, opportunities for planned outages, especially during the peak summer period, would be limited.
- Over the 18 month period under study, the Northeast Power Coordinating Council resource adequacy criterion is expected to be met. As permitted, to meet the criterion, the IESO forecast considers periodic reliance on interconnection benefits and potential use of other operating actions including outage rescheduling and emergency operating procedures.
- Extreme weather during peak periods places increased emphasis on reliable Ontario resources and energy imported from neighbouring systems. To maximize the ability to respond to these peak period requirements the following actions have been implemented:
 - Day Ahead Commitment Process, to allow imports to be scheduled and to commit units day ahead, facilitating better planning with the markets surrounding Ontario
 - Emergency Load Reduction Program, to give consumers incentives to reduce their loads, like the markets surrounding Ontario

Transmission Adequacy

- The Ontario transmission system is expected to be adequate to supply the coming summer's demand under the forecast conditions.
- The projected power flows over the Trafalgar autotransformers and Middleport autotransformers are approaching but not exceeding the maximum station capability.
- The recent replacement of a Cherrywood transformer which had been derated will further enhance the load supply to central Toronto well before the summer 2007 peak period.
- Timely completion of the Goreway Station Phase One will reduce the loading on the Claireville TS autotransformers in summer 2007, and reduce the risk of overloading in the event of a long term failure of one of these autotransformers
- Completion by Hydro One of the John Transformer Station (TS) to Esplanade TS link by the fall of 2007 will also enhance reliability to central Toronto by increasing the capability to transfer some loads from their normal supply east of the city, to an alternate supply from the west, and vice versa.
- The Queenston Flow West project, originally scheduled for June 2006, continues to be delayed. Once in service it will increase the capability of the transmission system connecting the Niagara River generation at Queenston to the grid in the Hamilton area by about 800 MW, and will permit increased imports from New York of at least 350 MW, and up to 800 MW depending on the load and generation dispatch in Ontario.

- An existing Special Protection System at St. Lawrence TS was modified for summer 2006, allowing increased westward transfers, and is planned to be enhanced further to increase its functionality and to make it more reliable under peak load conditions, to maximize simultaneous import capability from Hydro Quebec and New York.
- Hydro One and TransÉnergie have signed an agreement to build a high voltage direct current (HVDC) interconnection between Hawthorne TS in Ontario and Outouais station in Quebec with a capacity of 1250 MW. Although the project is not scheduled for in service in the timeframe of this Outlook and transmission outages have not yet been scheduled it is expected that the in the near future extensive transmission work related to the project will commence.
- The IESO entered in a Reliability Must Run Contract with OPG for Lennox GS. Studies performed by the IESO concluded that the removal of Lennox from the IESO-controlled grid and IESO-administered markets, without adequate replacement resources or mechanisms could result in significant adverse local area reliability impacts.
- Extensive work needs to be completed at the Lambton switchyard to connect the new St. Clair Power and Greenfield Energy Centre generation projects. To complete the work on time, a large volume of equipment outages must proceed as scheduled, or risk delays to the replacement generation for Lambton coal capacity. Some of these outages will restrict the output of the existing Lambton generation, reducing the resources available to supply Ontario demand during those periods.
- Phase angle regulators (PARs) are installed on the Michigan Ontario interconnection but are temporarily bypassed until an agreement is reached to make full use of their regulating capability. The 230 kV interconnection line, B3N, between Scott TS in Ontario and Bunce Creek in Michigan was recently returned to service thus restoring the Michigan Ontario interconnection to its full capability with the PARs bypassed.
- In June of 2006, GLP's Wawa to Third Line 230 kV circuit was completed. The addition of this circuit has increased the transfer capability eastward from Wawa, has unrestricted Brookfield generation in the vicinity of Wawa TS, and has increased the reliability of supply to Sault St. Marie by providing a third 230 kV transmission circuit into the city. The new circuit also serves as the connection point for both phases of the Prince Wind Power Project. The increase in available generation resources resulting from these transmission enhancements has led to congestion on the transmission system east of Sault St. Marie. The IESO will be reviewing the existing operating limits in that area, to reduce congestion to the extent possible.

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Appendix A Resource Adequacy Assessment Details

Table A1 Assessment of Resource Adequacy: Normal Weather,
Firm Resource Scenario

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
07-Jan-07	31,209	3,537	368	28,040	26,857	18.7	4,424	13.7	3,241	1,183
14-Jan-07	31,209	3,543	368	28,034	27,254	16.9	4,049	13.6	3,269	780
21-Jan-07	31,209	3,517	368	28,060	27,802	15.0	3,653	13.9	3,395	258
28-Jan-07	31,209	3,466	368	28,111	27,506	16.6	3,992	14.0	3,387	605
04-Feb-07	31,209	3,013	368	28,564	27,334	19.3	4,611	14.1	3,381	1,230
11-Feb-07	31,214	3,076	368	28,506	27,152	19.8	4,701	14.1	3,347	1,354
18-Feb-07	31,214	3,539	368	28,043	26,706	19.3	4,532	13.6	3,195	1,337
25-Feb-07	31,214	3,573	368	28,009	26,090	22.0	5,049	13.6	3,130	1,919
04-Mar-07	31,214	4,904	368	26,678	26,337	15.5	3,589	14.1	3,248	341
11-Mar-07	31,214	6,277	368	25,305	25,619	13.3	2,969	14.7	3,283	-314
18-Mar-07	31,214	7,033	368	24,549	24,439	15.3	3,258	14.8	3,148	110
25-Mar-07	31,214	7,043	368	24,539	24,219	16.3	3,432	14.7	3,112	320
01-Apr-07	31,214	7,562	368	24,020	23,648	16.5	3,408	14.7	3,036	372
08-Apr-07	31,214	7,779	342	23,777	23,321	17.1	3,467	14.8	3,011	456
15-Apr-07	31,214	7,873	342	23,683	22,911	19.0	3,782	15.1	3,010	772
22-Apr-07	31,214	7,049	342	24,507	22,866	23.5	4,664	15.2	3,023	1,641
29-Apr-07	31,214	7,087	342	24,469	22,384	25.6	4,991	14.9	2,906	2,085
06-May-07	31,214	8,362	342	23,194	22,171	19.7	3,811	14.4	2,788	1,023
13-May-07	31,214	7,304	342	24,252	22,273	26.6	5,093	16.3	3,114	1,979
20-May-07	31,214	7,771	342	23,785	22,794	21.8	4,257	16.7	3,266	991
27-May-07	31,214	5,894	342	25,662	24,393	25.2	5,172	19.1	3,903	1,269
03-Jun-07	31,214	5,945	342	25,611	24,609	23.1	4,801	18.3	3,799	1,002
10-Jun-07	31,214	4,831	342	26,725	25,354	22.8	4,958	16.5	3,587	1,371
17-Jun-07	31,214	4,070	342	27,486	27,160	16.8	3,948	15.4	3,622	326
24-Jun-07	31,214	3,221	342	28,335	28,392	16.1	3,925	16.3	3,982	-57
01-Jul-07	31,214	2,911	342	28,645	28,006	19.7	4,723	17.1	4,084	639
08-Jul-07	31,214	2,968	342	28,588	27,616	18.9	4,535	14.8	3,563	972
15-Jul-07	31,214	2,968	342	28,588	28,687	15.0	3,719	15.4	3,818	-99
22-Jul-07	31,214	2,885	342	28,671	29,509	12.7	3,237	16.0	4,075	-838
29-Jul-07	31,214	2,874	342	28,682	28,229	16.7	4,110	14.9	3,657	453
05-Aug-07	31,241	3,227	342	28,356	27,535	18.7	4,475	15.3	3,654	821
12-Aug-07	31,241	3,227	342	28,356	28,412	15.2	3,732	15.4	3,788	-56
19-Aug-07	31,241	3,227	342	28,356	28,070	16.5	4,005	15.3	3,719	286
26-Aug-07	31,241	3,227	342	28,356	26,857	22.3	5,176	15.9	3,677	1,499
02-Sep-07	31,241	4,278	342	27,305	26,943	16.1	3,784	14.6	3,422	362
09-Sep-07	31,241	4,766	342	26,817	26,426	18.9	4,269	17.2	3,878	391
16-Sep-07	31,241	5,757	342	25,826	25,607	18.2	3,971	17.2	3,752	219
23-Sep-07	31,241	6,978	342	24,605	24,569	16.6	3,510	16.5	3,474	36
30-Sep-07	31,241	6,754	342	24,829	23,402	20.9	4,288	13.9	2,861	1,427

Note: The reader should be aware that [Security and Adequacy Assessments](#) are published on the IESO web site on a weekly and daily basis that progressively supersedes information presented in this report.

(Table A1 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
07-Oct-07	31,241	7,003	342	24,580	22,785	24.0	4,764	15.0	2,969	1,795
14-Oct-07	31,241	7,810	342	23,773	22,819	18.8	3,757	14.0	2,803	954
21-Oct-07	31,241	7,796	342	23,787	23,240	16.5	3,361	13.8	2,814	547
28-Oct-07	31,241	8,291	342	23,292	23,740	12.2	2,538	14.4	2,986	-448
04-Nov-07	31,241	8,291	342	23,292	24,258	9.5	2,020	14.0	2,986	-966
11-Nov-07	31,241	7,640	342	23,943	24,766	9.9	2,152	13.7	2,975	-823
18-Nov-07	31,241	6,649	342	24,934	25,435	11.5	2,576	13.8	3,077	-501
25-Nov-07	31,241	7,144	342	24,439	25,958	7.3	1,664	14.0	3,183	-1,519
02-Dec-07	31,241	6,023	342	25,560	25,882	12.2	2,786	13.7	3,108	-322
09-Dec-07	31,241	5,605	342	25,978	26,862	9.8	2,314	13.5	3,198	-884
16-Dec-07	31,241	5,095	342	26,488	27,154	10.8	2,590	13.6	3,256	-666
23-Dec-07	31,241	4,114	342	27,469	27,513	13.6	3,279	13.7	3,323	-44
30-Dec-07	31,241	2,748	342	28,835	25,689	28.7	6,436	14.7	3,290	3,146
06-Jan-08	31,241	2,721	342	28,862	26,916	21.8	5,168	13.6	3,222	1,946
13-Jan-08	31,251	2,679	342	28,914	27,268	20.1	4,847	13.3	3,201	1,646
20-Jan-08	31,251	2,127	342	29,466	27,767	20.4	4,993	13.5	3,294	1,699
27-Jan-08	31,251	2,136	342	29,457	27,526	21.8	5,272	13.8	3,341	1,931
03-Feb-08	31,251	3,028	342	28,565	27,337	18.9	4,540	13.8	3,312	1,228
10-Feb-08	31,251	3,084	342	28,509	27,151	19.4	4,638	13.7	3,280	1,358
17-Feb-08	31,251	3,072	342	28,521	26,847	20.9	4,935	13.8	3,261	1,674
24-Feb-08	31,251	3,671	342	27,922	26,169	21.3	4,896	13.7	3,143	1,753
02-Mar-08	31,251	3,671	342	27,922	26,556	20.5	4,758	14.6	3,392	1,366
09-Mar-08	31,251	4,931	342	26,662	25,786	19.0	4,250	15.1	3,374	876
16-Mar-08	31,251	4,944	342	26,649	24,713	24.8	5,295	15.7	3,359	1,936
23-Mar-08	31,251	5,434	342	26,159	24,369	23.5	4,983	15.1	3,193	1,790
30-Mar-08	31,251	6,728	342	24,865	23,674	20.3	4,188	14.5	2,997	1,191
06-Apr-08	31,251	6,893	342	24,700	23,449	21.2	4,328	15.1	3,077	1,251
13-Apr-08	31,251	6,983	342	24,610	23,038	23.3	4,646	15.4	3,074	1,572
20-Apr-08	31,251	6,511	342	25,082	23,001	26.0	5,178	15.6	3,097	2,081
27-Apr-08	31,251	7,359	342	24,234	22,106	23.9	4,679	13.1	2,551	2,128
04-May-08	31,251	5,280	342	26,313	22,677	35.6	6,902	16.8	3,266	3,636
11-May-08	31,251	5,698	342	25,895	22,404	34.7	6,675	16.6	3,184	3,491
18-May-08	31,251	5,697	342	25,896	22,958	32.1	6,294	17.1	3,356	2,938
25-May-08	31,251	5,181	342	26,412	24,163	28.1	5,800	17.2	3,551	2,249
01-Jun-08	31,251	5,184	342	26,409	24,392	26.2	5,477	16.5	3,460	2,017
08-Jun-08	31,251	4,323	342	27,270	25,259	25.1	5,472	15.9	3,461	2,011
15-Jun-08	31,251	3,788	342	27,805	27,330	17.5	4,144	15.5	3,669	475
22-Jun-08	31,251	3,940	342	27,653	28,534	12.7	3,121	16.3	4,002	-881
29-Jun-08	31,251	3,788	342	27,805	28,110	15.6	3,760	16.9	4,065	-305

**Table A2 Assessment of Resource Adequacy: Normal Weather,
Planned Resource Scenario**

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
07-Jan-07	31,209	3,537	434	28,106	26,857	19.0	4,490	13.7	3,241	1,249
14-Jan-07	31,209	3,543	434	28,100	27,254	17.2	4,115	13.6	3,269	846
21-Jan-07	31,209	3,517	434	28,126	27,802	15.2	3,719	13.9	3,395	324
28-Jan-07	31,209	3,466	434	28,177	27,506	16.8	4,058	14.0	3,387	671
04-Feb-07	31,209	3,013	434	28,630	27,334	19.5	4,677	14.1	3,381	1,296
11-Feb-07	31,214	3,076	434	28,572	27,152	20.0	4,767	14.1	3,347	1,420
18-Feb-07	31,214	3,539	434	28,109	26,706	19.6	4,598	13.6	3,195	1,403
25-Feb-07	31,214	3,573	434	28,075	26,090	22.3	5,115	13.6	3,130	1,985
04-Mar-07	31,214	4,904	434	26,744	26,337	15.8	3,655	14.1	3,248	407
11-Mar-07	31,214	6,277	434	25,371	25,619	13.6	3,035	14.7	3,283	-248
18-Mar-07	31,214	7,033	434	24,615	24,439	15.6	3,324	14.8	3,148	176
25-Mar-07	31,214	7,043	434	24,605	24,219	16.6	3,498	14.7	3,112	386
01-Apr-07	31,214	7,562	434	24,086	23,648	16.9	3,474	14.7	3,036	438
08-Apr-07	31,214	7,779	403	23,838	23,321	17.4	3,528	14.8	3,011	517
15-Apr-07	31,214	7,873	403	23,744	22,911	19.3	3,843	15.1	3,010	833
22-Apr-07	31,214	7,049	403	24,568	22,866	23.8	4,725	15.2	3,023	1,702
29-Apr-07	31,214	7,092	403	24,525	22,384	25.9	5,047	14.9	2,906	2,141
06-May-07	31,214	8,362	403	23,255	22,171	20.0	3,872	14.4	2,788	1,084
13-May-07	31,214	7,304	403	24,313	22,273	26.9	5,154	16.3	3,114	2,040
20-May-07	31,214	7,771	403	23,846	22,794	22.1	4,318	16.7	3,266	1,052
27-May-07	31,214	5,894	403	25,723	24,393	25.5	5,233	19.1	3,903	1,330
03-Jun-07	31,214	5,945	406	25,675	24,609	23.4	4,865	18.3	3,799	1,066
10-Jun-07	31,214	4,831	406	26,789	25,354	23.1	5,022	16.5	3,587	1,435
17-Jun-07	31,214	4,070	406	27,550	27,160	17.0	4,012	15.4	3,622	390
24-Jun-07	31,699	3,221	406	28,884	28,405	18.3	4,474	16.4	3,995	479
01-Jul-07	31,699	2,911	406	29,194	28,080	22.0	5,272	17.4	4,158	1,114
08-Jul-07	31,699	2,969	406	29,136	27,692	21.1	5,083	15.1	3,639	1,444
15-Jul-07	31,699	2,968	406	29,137	28,685	17.2	4,268	15.3	3,816	452
22-Jul-07	31,699	2,914	406	29,191	29,520	14.8	3,757	16.1	4,086	-329
29-Jul-07	31,699	2,927	406	29,178	28,266	18.7	4,606	15.0	3,694	912
05-Aug-07	31,726	3,249	406	28,883	27,611	21.0	5,002	15.6	3,730	1,272
12-Aug-07	31,726	3,227	406	28,905	28,412	17.4	4,281	15.4	3,788	493
19-Aug-07	31,726	3,227	406	28,905	28,086	18.7	4,554	15.3	3,735	819
26-Aug-07	31,726	3,227	406	28,905	26,932	24.7	5,725	16.2	3,752	1,973
02-Sep-07	31,726	4,278	406	27,854	26,954	18.4	4,333	14.6	3,433	900
09-Sep-07	31,726	4,766	406	27,366	26,501	21.4	4,818	17.5	3,953	865
16-Sep-07	31,726	5,757	406	26,375	25,677	20.7	4,520	17.5	3,822	698
23-Sep-07	31,726	6,978	406	25,154	24,604	19.2	4,059	16.6	3,509	550
30-Sep-07	31,726	6,754	406	25,378	23,479	23.6	4,837	14.3	2,938	1,899

Note: The reader should be aware that [Security and Adequacy Assessments](#) are published on the IESO web site on a weekly and daily basis that progressively supersedes information presented in this report.

(Table A2 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
07-Oct-07	31,802	7,071	406	25,137	22,862	26.9	5,321	15.4	3,046	2,275
14-Oct-07	31,802	7,878	406	24,330	22,896	21.6	4,314	14.4	2,880	1,434
21-Oct-07	31,802	7,865	406	24,343	23,272	19.2	3,917	13.9	2,846	1,071
28-Oct-07	31,802	8,360	406	23,848	23,737	14.9	3,094	14.4	2,983	111
04-Nov-07	31,802	8,360	406	23,848	24,246	12.1	2,576	14.0	2,974	-398
11-Nov-07	31,815	7,711	406	24,509	24,755	12.5	2,718	13.6	2,964	-246
18-Nov-07	31,815	6,720	406	25,500	25,445	14.1	3,142	13.8	3,087	55
25-Nov-07	31,815	7,215	406	25,005	25,968	9.8	2,230	14.0	3,193	-963
02-Dec-07	31,815	6,104	406	26,116	25,885	14.7	3,342	13.7	3,111	231
09-Dec-07	31,815	5,686	406	26,534	26,845	12.1	2,870	13.4	3,181	-311
16-Dec-07	31,815	5,176	406	27,044	27,147	13.2	3,146	13.6	3,249	-103
23-Dec-07	31,815	4,185	406	28,035	27,506	15.9	3,845	13.7	3,316	529
30-Dec-07	31,815	2,829	406	29,391	25,765	31.2	6,992	15.0	3,366	3,626
06-Jan-08	31,815	2,792	406	29,428	26,992	24.2	5,734	13.9	3,298	2,436
13-Jan-08	31,825	2,740	406	29,490	27,344	22.5	5,423	13.6	3,277	2,146
20-Jan-08	31,825	2,188	406	30,042	27,844	22.8	5,569	13.8	3,371	2,198
27-Jan-08	31,825	2,197	406	30,033	27,602	24.2	5,848	14.1	3,417	2,431
03-Feb-08	31,825	3,089	406	29,141	27,413	21.3	5,116	14.1	3,388	1,728
10-Feb-08	31,836	3,145	406	29,097	27,229	21.9	5,226	14.1	3,358	1,868
17-Feb-08	31,836	3,132	406	29,110	26,925	23.4	5,524	14.2	3,339	2,185
24-Feb-08	31,836	3,722	406	28,520	26,247	23.9	5,494	14.0	3,221	2,273
02-Mar-08	31,836	3,722	406	28,520	26,634	23.1	5,356	15.0	3,470	1,886
09-Mar-08	31,836	4,982	406	27,260	25,864	21.6	4,848	15.4	3,452	1,396
16-Mar-08	31,836	5,005	406	27,237	24,791	27.6	5,883	16.1	3,437	2,446
23-Mar-08	31,836	5,514	406	26,728	24,447	26.2	5,552	15.5	3,271	2,281
30-Mar-08	31,836	6,813	406	25,429	23,752	23.0	4,752	14.9	3,075	1,677
06-Apr-08	31,836	6,995	406	25,247	23,527	23.9	4,875	15.5	3,155	1,720
13-Apr-08	31,836	7,108	406	25,134	23,116	25.9	5,170	15.8	3,152	2,018
20-Apr-08	31,836	6,655	406	25,587	23,079	28.6	5,683	16.0	3,175	2,508
27-Apr-08	31,836	7,600	406	24,642	22,185	26.0	5,087	13.5	2,630	2,457
04-May-08	31,859	5,550	406	26,715	22,755	37.6	7,304	17.2	3,344	3,960
11-May-08	31,859	5,962	406	26,303	22,482	36.9	7,083	17.0	3,262	3,821
18-May-08	31,859	5,979	406	26,286	23,035	34.1	6,684	17.5	3,433	3,251
25-May-08	31,859	5,462	406	26,803	24,239	30.0	6,191	17.6	3,627	2,564
01-Jun-08	31,859	5,483	406	26,782	24,468	28.0	5,850	16.9	3,536	2,314
08-Jun-08	32,128	4,437	406	28,097	25,377	28.9	6,299	16.4	3,579	2,720
15-Jun-08	32,128	3,955	406	28,579	27,423	20.8	4,918	15.9	3,762	1,156
22-Jun-08	32,128	4,116	406	28,418	28,503	15.8	3,886	16.2	3,971	-85
29-Jun-08	32,128	4,045	406	28,489	28,108	18.5	4,444	16.9	4,063	381

Table A3 Demand Forecast Range for Required Resources Calculation

Week Ending Day	Ontario Demand Normal Weather MW	Ontario Demand Extreme Weather MW	Week Ending Day	Ontario Demand Normal Weather MW	Ontario Demand Extreme Weather MW
07-Jan-07	23,616	24,533	07-Oct-07	19,816	23,879
14-Jan-07	23,985	24,937	14-Oct-07	20,016	20,690
21-Jan-07	24,407	25,400	21-Oct-07	20,426	21,272
28-Jan-07	24,119	25,222	28-Oct-07	20,754	21,513
04-Feb-07	23,953	24,934	04-Nov-07	21,272	21,829
11-Feb-07	23,805	24,880	11-Nov-07	21,791	22,435
18-Feb-07	23,511	24,504	18-Nov-07	22,358	23,238
25-Feb-07	22,960	24,165	25-Nov-07	22,775	23,679
04-Mar-07	23,089	24,152	02-Dec-07	22,774	24,123
11-Mar-07	22,336	23,842	09-Dec-07	23,664	24,804
18-Mar-07	21,291	22,639	16-Dec-07	23,898	24,801
25-Mar-07	21,107	22,187	23-Dec-07	24,190	25,427
01-Apr-07	20,612	21,743	30-Dec-07	22,399	23,509
08-Apr-07	20,310	21,732	06-Jan-08	23,694	24,612
15-Apr-07	19,901	21,003	13-Jan-08	24,067	25,019
22-Apr-07	19,843	21,938	20-Jan-08	24,473	25,467
29-Apr-07	19,478	21,932	27-Jan-08	24,185	25,288
06-May-07	19,383	21,677	03-Feb-08	24,025	25,006
13-May-07	19,159	22,254	10-Feb-08	23,871	24,946
20-May-07	19,528	21,798	17-Feb-08	23,586	24,579
27-May-07	20,490	22,496	24-Feb-08	23,026	24,231
03-Jun-07	20,810	24,911	02-Mar-08	23,164	24,227
10-Jun-07	21,767	24,373	09-Mar-08	22,412	23,934
17-Jun-07	23,538	25,613	16-Mar-08	21,354	22,705
24-Jun-07	24,410	26,625	23-Mar-08	21,176	22,250
01-Jul-07	23,922	26,269	30-Mar-08	20,677	21,811
08-Jul-07	24,053	25,696	06-Apr-08	20,372	22,064
15-Jul-07	24,869	26,547	13-Apr-08	19,964	21,065
22-Jul-07	25,434	27,464	20-Apr-08	19,904	22,067
29-Jul-07	24,572	26,430	27-Apr-08	19,555	22,056
05-Aug-07	23,881	26,503	04-May-08	19,411	21,802
12-Aug-07	24,624	27,456	11-May-08	19,220	22,379
19-Aug-07	24,351	26,640	18-May-08	19,602	21,920
26-Aug-07	23,180	25,856	25-May-08	20,612	22,618
02-Sep-07	23,521	25,945	01-Jun-08	20,932	23,590
09-Sep-07	22,548	25,770	08-Jun-08	21,798	24,414
16-Sep-07	21,855	25,565	15-Jun-08	23,661	25,735
23-Sep-07	21,095	24,873	22-Jun-08	24,532	26,746
30-Sep-07	20,541	23,423	29-Jun-08	24,045	26,392

**Table A4 Assessment of Resource Adequacy: Extreme Weather,
Firm Resource Scenario**

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
07-Jan-07	31,209	3,537	368	28,040	27,776	14.3	3,507	13.2	3,243	264
14-Jan-07	31,209	3,537	368	28,040	28,255	12.4	3,103	13.3	3,318	-215
21-Jan-07	31,209	3,517	368	28,060	28,866	10.5	2,660	13.7	3,466	-806
28-Jan-07	31,209	3,466	368	28,111	28,653	11.5	2,889	13.6	3,431	-542
04-Feb-07	31,209	3,005	368	28,572	28,289	14.6	3,638	13.5	3,355	283
11-Feb-07	31,214	3,058	368	28,524	28,223	14.7	3,644	13.4	3,343	301
18-Feb-07	31,214	3,553	368	28,029	27,697	14.4	3,525	13.0	3,193	332
25-Feb-07	31,214	3,534	368	28,048	27,284	16.1	3,883	12.9	3,119	764
04-Mar-07	31,214	4,904	368	26,678	27,577	10.5	2,526	14.2	3,425	-899
11-Mar-07	31,214	6,277	368	25,305	27,234	6.1	1,463	14.2	3,392	-1,929
18-Mar-07	31,214	7,033	368	24,549	25,837	8.4	1,910	14.1	3,198	-1,288
25-Mar-07	31,214	7,033	368	24,549	25,300	10.7	2,362	14.0	3,113	-751
01-Apr-07	31,214	7,547	368	24,035	24,786	10.5	2,292	14.0	3,043	-751
08-Apr-07	31,214	7,763	342	23,793	24,830	9.5	2,061	14.3	3,098	-1,037
15-Apr-07	31,214	7,856	342	23,700	23,914	12.8	2,697	13.9	2,911	-214
22-Apr-07	31,214	7,066	342	24,490	25,018	11.6	2,552	14.0	3,080	-528
29-Apr-07	31,214	7,129	342	24,427	24,999	11.4	2,495	14.0	3,067	-572
06-May-07	31,214	8,362	342	23,194	24,654	7.0	1,517	13.7	2,977	-1,460
13-May-07	31,214	7,304	342	24,252	25,393	9.0	1,998	14.1	3,139	-1,141
20-May-07	31,214	7,771	342	23,785	24,689	9.1	1,987	13.3	2,891	-904
27-May-07	31,214	5,894	342	25,662	25,698	14.1	3,166	14.2	3,202	-36
03-Jun-07	31,214	5,945	342	25,611	28,381	2.8	700	13.9	3,470	-2,770
10-Jun-07	31,214	4,831	342	26,725	27,726	9.7	2,352	13.8	3,353	-1,001
17-Jun-07	31,214	4,070	342	27,486	29,091	7.3	1,873	13.6	3,478	-1,605
24-Jun-07	31,214	3,221	342	28,335	30,305	6.4	1,710	13.8	3,680	-1,970
01-Jul-07	31,214	2,911	342	28,645	29,853	9.0	2,376	13.6	3,584	-1,208
08-Jul-07	31,214	2,968	342	28,588	29,195	11.3	2,892	13.6	3,499	-607
15-Jul-07	31,214	2,968	342	28,588	30,188	7.7	2,041	13.7	3,641	-1,600
22-Jul-07	31,214	2,876	342	28,680	31,276	4.4	1,216	13.9	3,812	-2,596
29-Jul-07	31,214	2,910	342	28,646	30,031	8.4	2,216	13.6	3,601	-1,385
05-Aug-07	31,241	3,227	342	28,356	30,174	7.0	1,853	13.9	3,671	-1,818
12-Aug-07	31,241	3,227	342	28,356	31,321	3.3	900	14.1	3,865	-2,965
19-Aug-07	31,241	3,227	342	28,356	30,336	6.4	1,716	13.9	3,696	-1,980
26-Aug-07	31,241	3,227	342	28,356	29,414	9.7	2,500	13.8	3,558	-1,058
02-Sep-07	31,241	4,278	342	27,305	29,516	5.2	1,360	13.8	3,571	-2,211
09-Sep-07	31,241	4,766	342	26,817	29,376	4.1	1,047	14.0	3,606	-2,559
16-Sep-07	31,241	5,757	342	25,826	29,140	1.0	261	14.0	3,575	-3,314
23-Sep-07	31,241	6,978	342	24,605	28,360	-1.1	-268	14.0	3,487	-3,755
30-Sep-07	31,241	6,754	342	24,829	26,669	6.0	1,406	13.9	3,246	-1,840

(Table A4 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
07-Oct-07	31,241	6,979	342	24,604	27,280	3.0	725	14.2	3,401	-2,676
14-Oct-07	31,241	7,796	342	23,787	23,482	15.0	3,097	13.5	2,792	305
21-Oct-07	31,241	7,796	342	23,787	24,196	11.8	2,515	13.8	2,924	-409
28-Oct-07	31,241	8,291	342	23,292	24,455	8.3	1,779	13.7	2,942	-1,163
04-Nov-07	31,241	8,291	342	23,292	24,831	6.7	1,463	13.8	3,002	-1,539
11-Nov-07	31,241	7,640	342	23,943	25,418	6.7	1,508	13.3	2,983	-1,475
18-Nov-07	31,241	6,649	342	24,934	26,383	7.3	1,696	13.5	3,145	-1,449
25-Nov-07	31,241	7,144	342	24,439	26,872	3.2	760	13.5	3,193	-2,433
02-Dec-07	31,241	5,988	342	25,595	27,319	6.1	1,472	13.3	3,196	-1,724
09-Dec-07	31,241	5,589	342	25,994	28,049	4.8	1,190	13.1	3,245	-2,055
16-Dec-07	31,241	5,084	342	26,499	28,065	6.9	1,698	13.2	3,264	-1,566
23-Dec-07	31,241	4,114	342	27,469	28,873	8.0	2,042	13.6	3,446	-1,404
30-Dec-07	31,241	2,762	342	28,821	26,624	22.6	5,312	13.3	3,115	2,197
06-Jan-08	31,241	2,721	342	28,862	27,702	17.3	4,250	12.6	3,090	1,160
13-Jan-08	31,251	2,658	342	28,935	28,180	15.7	3,916	12.6	3,161	755
20-Jan-08	31,251	2,123	342	29,470	28,732	15.7	4,003	12.8	3,265	738
27-Jan-08	31,251	2,123	342	29,470	28,502	16.5	4,182	12.7	3,214	968
03-Feb-08	31,251	3,004	342	28,589	28,286	14.3	3,583	13.1	3,280	303
10-Feb-08	31,251	3,065	342	28,528	28,218	14.4	3,582	13.1	3,272	310
17-Feb-08	31,251	3,086	342	28,507	27,751	16.0	3,928	12.9	3,172	756
24-Feb-08	31,251	3,671	342	27,922	27,402	15.2	3,691	13.1	3,171	520
02-Mar-08	31,251	3,671	342	27,922	27,681	15.3	3,695	14.3	3,454	241
09-Mar-08	31,251	4,931	342	26,662	27,362	11.4	2,728	14.3	3,428	-700
16-Mar-08	31,251	4,931	342	26,662	25,875	17.4	3,957	14.0	3,170	787
23-Mar-08	31,251	5,423	342	26,170	25,266	17.6	3,920	13.6	3,016	904
30-Mar-08	31,251	6,713	342	24,880	24,740	14.1	3,069	13.4	2,929	140
06-Apr-08	31,251	6,865	342	24,728	25,053	12.1	2,664	13.6	2,989	-325
13-Apr-08	31,251	6,965	342	24,628	23,883	16.9	3,563	13.4	2,818	745
20-Apr-08	31,251	6,523	342	25,070	25,155	13.6	3,003	14.0	3,088	-85
27-Apr-08	31,251	7,411	342	24,182	24,856	9.6	2,126	12.7	2,800	-674
04-May-08	31,251	5,280	342	26,313	24,836	20.7	4,511	13.9	3,034	1,477
11-May-08	31,251	5,697	342	25,896	25,364	15.7	3,517	13.3	2,985	532
18-May-08	31,251	5,697	342	25,896	24,827	18.1	3,976	13.3	2,907	1,069
25-May-08	31,251	5,200	342	26,393	25,631	16.7	3,775	13.3	3,013	762
01-Jun-08	31,251	5,181	342	26,412	26,602	12.0	2,822	12.8	3,012	-190
08-Jun-08	31,251	4,323	342	27,270	27,651	11.7	2,856	13.3	3,237	-381
15-Jun-08	31,251	3,788	342	27,805	29,254	8.0	2,070	13.7	3,519	-1,449
22-Jun-08	31,251	3,940	342	27,653	30,454	3.4	907	13.9	3,708	-2,801
29-Jun-08	31,251	3,788	342	27,805	30,008	5.4	1,413	13.7	3,616	-2,203

**Table A5 Assessment of Resource Adequacy: Extreme Weather,
Planned Resource Scenario**

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
07-Jan-07	31,209	3,537	434	28,106	27,776	14.6	3,573	13.2	3,243	330
14-Jan-07	31,209	3,537	434	28,106	28,255	12.7	3,169	13.3	3,318	-149
21-Jan-07	31,209	3,517	434	28,126	28,866	10.7	2,726	13.7	3,466	-740
28-Jan-07	31,209	3,466	434	28,177	28,653	11.7	2,955	13.6	3,431	-476
04-Feb-07	31,209	3,005	434	28,638	28,289	14.9	3,704	13.5	3,355	349
11-Feb-07	31,214	3,058	434	28,590	28,223	14.9	3,710	13.4	3,343	367
18-Feb-07	31,214	3,553	434	28,095	27,697	14.7	3,591	13.0	3,193	398
25-Feb-07	31,214	3,534	434	28,114	27,284	16.3	3,949	12.9	3,119	830
04-Mar-07	31,214	4,904	434	26,744	27,577	10.7	2,592	14.2	3,425	-833
11-Mar-07	31,214	6,277	434	25,371	27,234	6.4	1,529	14.2	3,392	-1,863
18-Mar-07	31,214	7,033	434	24,615	25,837	8.7	1,976	14.1	3,198	-1,222
25-Mar-07	31,214	7,033	434	24,615	25,300	10.9	2,428	14.0	3,113	-685
01-Apr-07	31,214	7,547	434	24,101	24,786	10.8	2,358	14.0	3,043	-685
08-Apr-07	31,214	7,763	403	23,854	24,830	9.8	2,122	14.3	3,098	-976
15-Apr-07	31,214	7,856	403	23,761	23,914	13.1	2,758	13.9	2,911	-153
22-Apr-07	31,214	7,066	403	24,551	25,018	11.9	2,613	14.0	3,080	-467
29-Apr-07	31,214	7,129	403	24,488	24,999	11.7	2,556	14.0	3,067	-511
06-May-07	31,214	8,362	403	23,255	24,654	7.3	1,578	13.7	2,977	-1,399
13-May-07	31,214	7,304	403	24,313	25,393	9.3	2,059	14.1	3,139	-1,080
20-May-07	31,214	7,771	403	23,846	24,689	9.4	2,048	13.3	2,891	-843
27-May-07	31,214	5,894	403	25,723	25,698	14.3	3,227	14.2	3,202	25
03-Jun-07	31,214	5,945	406	25,675	28,381	3.1	764	13.9	3,470	-2,706
10-Jun-07	31,214	4,831	406	26,789	27,726	9.9	2,416	13.8	3,353	-937
17-Jun-07	31,214	4,070	406	27,550	29,091	7.6	1,937	13.6	3,478	-1,541
24-Jun-07	31,699	3,221	406	28,884	30,318	8.5	2,259	13.9	3,693	-1,434
01-Jul-07	31,699	2,911	406	29,194	29,869	11.1	2,925	13.7	3,600	-675
08-Jul-07	31,699	2,968	406	29,137	29,187	13.4	3,441	13.6	3,491	-50
15-Jul-07	31,699	2,968	406	29,137	30,191	9.8	2,590	13.7	3,644	-1,054
22-Jul-07	31,699	2,876	406	29,229	31,266	6.4	1,765	13.8	3,802	-2,037
29-Jul-07	31,699	2,910	406	29,195	30,046	10.5	2,765	13.7	3,616	-851
05-Aug-07	31,726	3,227	406	28,905	30,178	9.1	2,402	13.9	3,675	-1,273
12-Aug-07	31,726	3,227	406	28,905	31,315	5.3	1,449	14.1	3,859	-2,410
19-Aug-07	31,726	3,227	406	28,905	30,345	8.5	2,265	13.9	3,705	-1,440
26-Aug-07	31,726	3,227	406	28,905	29,417	11.8	3,049	13.8	3,561	-512
02-Sep-07	31,726	4,278	406	27,854	29,536	7.4	1,909	13.8	3,591	-1,682
09-Sep-07	31,726	4,766	406	27,366	29,383	6.2	1,596	14.0	3,613	-2,017
16-Sep-07	31,726	5,757	406	26,375	29,160	3.2	810	14.1	3,595	-2,785
23-Sep-07	31,726	6,978	406	25,154	28,352	1.1	281	14.0	3,479	-3,198
30-Sep-07	31,726	6,754	406	25,378	26,653	8.4	1,955	13.8	3,230	-1,275

(Table A5 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
07-Oct-07	31,802	7,048	406	25,160	27,276	5.4	1,281	14.2	3,397	-2,116
14-Oct-07	31,802	7,865	406	24,343	23,477	17.7	3,653	13.5	2,787	866
21-Oct-07	31,802	7,865	406	24,343	24,193	14.4	3,071	13.7	2,921	150
28-Oct-07	31,802	8,360	406	23,848	24,431	10.9	2,335	13.6	2,918	-583
04-Nov-07	31,802	8,360	406	23,848	24,833	9.3	2,019	13.8	3,004	-985
11-Nov-07	31,815	7,711	406	24,509	25,415	9.2	2,074	13.3	2,980	-906
18-Nov-07	31,815	6,720	406	25,500	26,401	9.7	2,262	13.6	3,163	-901
25-Nov-07	31,815	7,215	406	25,005	26,889	5.6	1,326	13.6	3,210	-1,884
02-Dec-07	31,815	6,068	406	26,152	27,314	8.4	2,029	13.2	3,191	-1,162
09-Dec-07	31,815	5,660	406	26,560	28,056	7.1	1,756	13.1	3,252	-1,496
16-Dec-07	31,815	5,155	406	27,065	28,048	9.1	2,264	13.1	3,247	-983
23-Dec-07	31,815	4,185	406	28,035	28,870	10.3	2,608	13.5	3,443	-835
30-Dec-07	31,815	2,843	406	29,377	26,711	25.0	5,868	13.6	3,202	2,666
06-Jan-08	31,815	2,792	406	29,428	27,744	19.6	4,816	12.7	3,132	1,684
13-Jan-08	31,825	2,718	406	29,512	28,177	18.0	4,493	12.6	3,158	1,335
20-Jan-08	31,825	2,174	406	30,056	28,722	18.0	4,589	12.8	3,255	1,334
27-Jan-08	31,825	2,174	406	30,056	28,518	18.9	4,768	12.8	3,230	1,538
03-Feb-08	31,825	3,055	406	29,175	28,264	16.7	4,169	13.0	3,258	911
10-Feb-08	31,836	3,126	406	29,116	28,193	16.7	4,170	13.0	3,247	923
17-Feb-08	31,836	3,147	406	29,095	27,770	18.4	4,516	13.0	3,191	1,325
24-Feb-08	31,836	3,722	406	28,520	27,397	17.7	4,289	13.1	3,166	1,123
02-Mar-08	31,836	3,722	406	28,520	27,672	17.7	4,293	14.2	3,445	848
09-Mar-08	31,836	4,982	406	27,260	27,356	13.9	3,326	14.3	3,422	-96
16-Mar-08	31,836	4,989	406	27,253	25,935	20.0	4,548	14.2	3,230	1,318
23-Mar-08	31,836	5,484	406	26,758	25,321	20.3	4,508	13.8	3,071	1,437
30-Mar-08	31,836	6,774	406	25,468	24,705	16.8	3,657	13.3	2,894	763
06-Apr-08	31,836	6,926	406	25,316	25,040	14.7	3,252	13.5	2,976	276
13-Apr-08	31,836	7,026	406	25,216	23,929	19.7	4,151	13.6	2,864	1,287
20-Apr-08	31,836	6,584	406	25,658	25,142	16.3	3,591	13.9	3,075	516
27-Apr-08	31,836	7,472	406	24,770	24,831	12.3	2,714	12.6	2,775	-61
04-May-08	31,859	5,354	406	26,911	24,904	23.4	5,109	14.2	3,102	2,007
11-May-08	31,859	5,752	406	26,513	25,361	18.5	4,134	13.3	2,982	1,152
18-May-08	31,859	5,752	406	26,513	24,897	21.0	4,593	13.6	2,977	1,616
25-May-08	31,859	5,284	406	26,981	25,664	19.3	4,363	13.5	3,046	1,317
01-Jun-08	31,859	5,262	406	27,003	26,600	14.5	3,413	12.8	3,010	403
08-Jun-08	32,128	4,378	406	28,156	27,646	15.3	3,742	13.2	3,232	510
15-Jun-08	32,128	3,843	406	28,691	29,243	11.5	2,956	13.6	3,508	-552
22-Jun-08	32,128	3,995	406	28,539	30,422	6.7	1,793	13.7	3,676	-1,883
29-Jun-08	32,128	3,843	406	28,691	29,981	8.7	2,299	13.6	3,589	-1,290

Table A6 Energy Production Capability Forecast

Month	Firm Resource Scenario Forecast Energy Production Capability (GWh)	Planned Resource Scenario Forecast Energy Production Capability (GWh)
Jan 2007	16,899	16,912
Feb 2007	15,092	15,105
Mar 2007	14,138	14,151
Apr 2007	14,060	14,073
May 2007	15,269	15,283
Jun 2007	16,946	16,959
Jul 2007	17,505	17,519
Aug 2007	17,308	17,322
Sep 2007	15,205	15,218
Oct 2007	14,725	14,755
Nov 2007	14,572	14,609
Dec 2007	16,845	16,883
Jan 2008	17,731	17,821
Feb 2008	15,776	15,860
Mar 2008	16,025	16,115
Apr 2008	16,002	16,089
May 2008	15,907	16,012
Jun 2008	16,165	16,267

- End of Section -

Appendix B Transmission Projects

Zone	CAA-ID#	Transmitter	Description	Proposed I/S Date
East	2005-198	Hydro One Networks Inc.	Whitby TS new transformer station	2007-Q3
Essa	2006-233	Hydro One Networks Inc.	Orangeville TS Shunt Capacitor	2007-Q4
Essa	2006-227	Hydro One Networks Inc.	Everett TS new transformer station	2007-Q2
Essa	2006-211	Hydro One Networks Inc.	Holland Marsh TS new transformer station	2008-Q2
Essa	2006-EX277	Hydro One Networks Inc.	Essa TS: Retermination of 230 kV circuits E27 and M6E	2007-Q2
Niagara	2002-085	Hydro One Networks Inc.	Queenston Flow West	To be determined
Northeast	2004-EX211	Great Lakes Power Ltd.	Patrick St. TS - 8 oil circuit breakers replaced with SF6 breakers	2006-Q4
Northeast	2004-EX208	Great Lakes Power Ltd.	115 kV Thirdline Tie Breaker Installation - Between Breakers 445 and 455	2007-Q4
Northeast	2002-EX070	Great Lakes Power Ltd.	P21G 230 kV cct Upgraded to 374 MVA continuous rating	2007-Q1
Northeast	N/A	Great Lakes Power Ltd.	Replacement of 250 MVA Autotransformer @ Third Line TS	2007-Q4
Northeast	N/A	Great Lakes Power Ltd.	Third Line TS 250 MVA Autotransformer tap changer replacement	2007-Q4
Northeast	N/A	Great Lakes Power Ltd.	Maggie TS 115 kV structure replacement	2007-Q4
Northeast	2002-086	Hydro One Networks Inc.	Modify Moosonee SS	2007-Q3
Northeast	2002-086	Hydro One Networks Inc.	Modify Otter Rapids SS	2007-Q3
Northeast	2002-086	Hydro One Networks Inc.	Reinforce existing transmission facilities to supply Victor Mine	2007-Q3
Northeast		Hydro One Networks Inc.	Porcupine TS - Complete replacement of 500 kV and 115 kV breakers and reconfiguration of 500 kV terminations	2007-Q3
Northwest		Hydro One Networks Inc.	Red Lake TS	2007-Q3
Southwest	2006-233	Hydro One Networks Inc.	DetweilerTS Shunt Capacitor	2007-Q2
Southwest	2006-225	Hydro One Networks Inc.	Toyota Woodstock TS new transformer station	2007-Q2
Southwest	N/A	Hydro One Networks Inc.	Install Preston 230-115 kV auto-transformer	2007-Q3
Southwest	2006-221	Hydro One Networks Inc.	Halton TS and Meadowvale TS low voltage shunt capacitors	2007-Q2
Southwest	N/A	Hydro One Networks Inc.	Woodstock TS low voltage shunt capacitors	2007-Q2
Southwest	2006-EX299	Hydro One Networks Inc.	Burlington TS: Replace the lower rated 230/115 kV transformer and buswork that limits the station capability.	2008-Q1
Toronto	2002-057	Hydro One Networks Inc.	John x Esplanade 115 kV cable	2007-Q4
Toronto	2006-209	Hydro One Networks Inc.	Oshawa Area TS	2008-Q3
West	2006-Ex261	Hydro One Networks Inc.	L25/27N inline breakers	2006-Q4
West	2006-212	Hydro One Networks Inc.	London Talbot TS new transformer station	2007-Q3
West	N/A	Hydro One Networks Inc.	Essex TS: Reconfigure the 115 kV termination	2007-Q1
West	2005-194	Hydro One Networks Inc.	Tilbury TS: Reconfigure 115 kV circuit terminations	2007-Q2
West	N/A	Hydro One Networks Inc.	Belle River TS low voltage shunt capacitors	2007-Q3
West		Hydro One Networks Inc.	Lambton TS: Replace Air Blast breakers with SF6 breakers, replace buswork (strain bus with rigid bus) and reconfigure lines	2008-Q2
West		Hydro One Networks Inc.	Essex TS: Station Refurbishment	2007-Q3

- End of Section -

Appendix C Planned Transmission Outages

The following tables list the planned transmission outages by transmission zone, for transmission outages with an expected duration greater than five days, and/or for those transmission outages associated with a major project.

Table C1 Bruce Zone

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
No Transmission Outages To Report						

Table C2 East Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Purpose	Major Transmission Interface Impacted	Reduction in Limit
Mar 05 2007 7:00 AM	Mar 16 2007 6:00 PM	Hawthorne TS: HT4L24, L2L24, L24A::HAWTHORNE_TS::ST:LAWRENCE_TS, DL24, L24A::HAWTHORNE_TS::ST:LAWRENCE_TS, HL24	3834023	8 Hour	CWW	Replace all PLC & teleprotection equipment and replace and modify A and B Protection equipment on Line L24A at St Lawrence and Hawthorne	FIO	FIO reduced by 100MW
Mar 05 2007 5:00 AM	Mar 30 2007 6:00 PM	Hawthorne TS: HT4L24, DL24, L2L24, HL24, L24A::HAWTHORNE_TS::ST:LAWRENCE_TS, L24A::HAWTHORNE_TS::ST:LAWRENCE_TS	3885418	8 Hour	CWW	Replace all PLC & teleprotection equipment and replace and modify A and B Protection equipment on Line L24A at St Lawrence and Hawthorne	FIO	FIO reduced by 100MW
Aug 09 2006 7:00 AM	Aug 09 2007 3:00 PM	Lennox TS: KL522	4154657	2 Hour	CWW	CT mtes	No	No
Oct 11 2007 6:00 AM	Oct 26 2007 3:30 PM	Bowmanville SS: L20L42, R56-X520B, H2L520, R56-X520B, X520B::LENNOX_TS::BOWMANVILLE_SS, X520B::LENNOX_TS::BOWMANVILLE_SS, L20, X520B	4216582	6 Hour	CWW	Major mtce on GIS switches: R56-X520B, X520B-G, L520-G, H2L520-L & H2L520-G1, L20, 42-20 & L20, 42-62	No	No

Table C3 Essa Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Purpose	Major Transmission Interface Impacted	Reduction in Limit
Oct 23 2007 12:00 PM	Nov 10 2007 6:00 PM	Des Joachims TS: D4M::DES_JOACHIMS_TS::OTTER_CREEK_JCT, HL4, AL4, D4M::DES_JOACHIMS_TS::OTTER_CREEK_JCT, D4M::MINDEN_TS::OTTER_CREEK_JCT, AL4, D4M::MINDEN_TS::OTTER_CREEK_JCT, L4L81	4336774	4 Hour	CWW	Extended Line Outage (including all terminals) is required to complete: 1. Replacement of Line D4M B Relay & Installation of Breaker Failure Protection Scheme on 2 breakers at Des Joachims TS & 2. Replacement of Line D4M B Relay & Installation of Breaker	No	No
Mar 24 2007 6:00 PM	Apr 14 2007 5:00 AM	Essa TS: AT3	4337305	Non-Recallable	CWW	Const to remove the Essa AT3 lower bus in Bay 4. Const to remove (12) 230KV insulators from	No	No
Apr 14 2007 5:00 AM	Apr 22 2007 5:00 AM	Minden TS: 87-M6E, T3, M6E::BRACEBRIDGE_JCT::MUSKOKA_TS, HL7, M6E::COOPER'S_FALLS_JCT::ORILLIA_TS, HL9, M6E::MINDEN_TS::COOPER'S_FALLS_JCT, HT4, 30T2-M6E, 92T1-M6E, M6E::BRACEBRIDGE_JCT::BRACEBRIDGE_TS, T1-M6E, AT3, M6E::MINDEN_TS::COOPER'S_FALLS_JCT, M6E::MIDHURST_JCT::ORILLIA_TS, M6E::ESSA_TS::MIDHURST_JCT, M6E::ESSA_TS::MIDHURST_JCT	4337308	2 Day	CWW	To relocate the M6E from the H Bus to between the old AT3 Breaker and the new one installed with NCM's slip 118826 P&C to change H Bus protection modifications for the removal of M6E and Prep work for the	No	No
Apr 30 2007 5:00 AM	May 07 2007 5:00 AM	Parry Sound TS: 77T1-E27, 18-E27, 18-E27, E27::ESSA_TS::WAUBAUSHENE_JCT, AL8, AL26, E27::ESSA_TS::WAUBAUSHENE_JCT, AT3, SC21, A_BUS, SC21A, 18T2-A, E27::PARRY_SOUND_TS::WAUBAUSHENE_JCT, E27::WAUBAUSHENE_JCT::WAUBAUSHENE_TS, E27::PARRY_SOUND_TS::WAUBAUSHENE_JCT, E27::WAUBAUSHENE_JCT::WAUBAUSHENE_TS, 98-E27, SC21SC	4337344	4 Hour	CWW	To dis-connect the E27 from the A Bus To install new L27CVT's P&C to change A Bus protection modifications for the removal of E27 Old L27PC to be call APC at the end of this outage still needed for A Bus protections	No	No
May 07 2007 5:00 AM	May 13 2007 6:00 PM	Parry Sound TS: 77T1-E27, HL7, HL9, 18-E27, E27::PARRY_SOUND_TS::WAUBAUSHENE_JCT, E27::PARRY_SOUND_TS::WAUBAUSHENE_JCT, 98-E27, E27::WAUBAUSHENE_JCT::WAUBAUSHENE_TS, HT4, E27::ESSA_TS::WAUBAUSHENE_JCT, E27::ESSA_TS::WAUBAUSHENE_JCT, E27::WAUBAUSHENE_JCT::WAUBAUSHENE_TS	4337365	4 Hour	CWW	Lines Const To connect the E27 to the New 18-E27 Switch Station Const To Connect New 18-E27 Switch to the H Bus Station Const To Connect new L27CVT P&C to change H Bus	No	No

Table C4 Niagara Zone

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
No Transmission Outages To Report						

Table C5 Northeast Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Purpose	Major Transmission Interface Impacted	Reduction in Limit
Nov 22 2005 12:00 AM	Jun 14 2030 11:59 PM	Anjigami TS: ANJIGAMI LINE #1, ANJIGAMI LINE #1	3663682	Non-Recallable	CWW	Anjigami 115 kv line coming out of service because new 230 line going in service Anjigami Line being decommissioned	No	No
Dec 23 2005 7:00 AM	Dec 31 2006 11:59 PM	Third Line TS: 492, 488	3848447	Non-Recallable	CWW	to show the correct connectivity at Third Line.	No	No
Oct 19 2005 12:00 PM	Dec 31 2006 11:59 PM	Third Line TS: 415	3893872	Non-Recallable	CWW	Outage slip required to indicate correct connectivity to the DSO.	No	No
May 07 2006 6:30 AM	Dec 31 2006 11:59 PM	Mackay TS: 635, SAULT2::MACKAY_TS::THIRD_LINE_TS, 482, 632, SAULT2::MACKAY_TS::THIRD_LINE_TS	4118469	Non-Recallable	CWW	Sault #2 line required out of service in order for line to become K24G 230 kv line clearance to reterminate T1, T2 at Third Line T.S.	No	No
Nov 06 2006 8:00 AM	Mar 01 2007 5:00 PM	Porcupine TS: H2L502	4175452	8 Week	CWW	To replace H2L502 breaker with new SF6 breaker to remove The CT's	No	No
Apr 30 2007 8:00 AM	May 17 2007 4:00 PM	Algoma TS: T6-SS2, T6, T6-K, T6-A	4359325	8 Hour	CWW	Algoma Transformer T6 A&B Protections Replacement	No	No
Mar 24 2007 8:01 AM	Apr 13 2007 4:01 PM	Aubrey Falls GS: T1, G1T1, 20-P26W	4575714	Non-Recallable	CWW	Aubrey G1 - headgate overhaul, gov and breaker overhaul, T1 deluge replacement and cooling water piping replacement	No	No
May 14 2007 7:01 AM	Jun 03 2007 4:01 PM	Wells GS: 27-T27P, T27	4575887	Non-Recallable	CWW	Wells G2 - Annual maintenance and T27 transformer replacement and breaker overhauls.	No	No
Nov 26 2007 8:01 AM	Dec 16 2007 4:01 PM	Wells GS: 27-T28P, T28	4576307	Non-Recallable	CWW	Wells G1 - Annual maintenance AND T28 transformer replacement (if available)	No	No

Table C6 Northwest Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Purpose	Major Transmission Interface Impacted	Reduction in Limit
Apr 30 2005 12:01 AM	Dec 31 2072 11:59 PM	Thunder Bay TGS: C1	3149672	Non-Recallable	CWW	Remove Thunder Bay C1 from service	No	No
Jun 18 2007 6:30 AM	Jul 06 2007 6:30 PM	Mackenzie TS: 20-F25A, F25A::FORT_FRANCES_TS::MACKENZIE_TS, 22-F25A, F25A::FORT_FRANCES_TS::MACKENZIE_TS	4444218	4 Hour	CWW	Provincial Lines To replace structures F25A - Fort Frances TS X Mackenzie TS	OMTE, OMTW, EWTE, EWTW, MPFN, MPFS	OMTE - 70 MW OMTW - 250 MW EWTE - 75 MW EWTW - 50 MW MPFN - 50 MW MPFS - 140 MW
Oct 10 2006 9:01 AM	Dec 31 2007 11:59 PM	Sterling Chem. CTS: S-B1B, 13.8KV, T2, T1, B1, S-T1, S-T2	4501423	Non-Recallable	CWW	Permanent Shutdown of Plant.	No	No
Feb 26 2007 7:00 AM	Apr 05 2007 7:00 PM	Reserve JCT: A6P-LC, 2A6P	4600732	4 Hour	CWW	Provincial Lines to replace structures on Circuit A6P - Section A6P-LC x Port Arthur.	No	No

Table C7 Ottawa Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Purpose	Major Transmission Interface Impacted	Reduction in Limit
Dec 11 2006 6:00 AM	May 31 2007 5:00 PM	Hawthorne TS: 48-H9A, 64H9A-48	4574085	Non-Recallable	CWW	Lines Construction to dismantle circuit H9A Hawthorne x Borromee Jct. as the first phase of the HO project. A new double circuit tower will be built to replace the existing H9A towerline. Construction staging diagrams to follow. (From Kelbu)	H9A interchange OMW, not significant since DSA can still be used for import/export	

Table C8 Southwest Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Purpose	Major Transmission Interface Impacted	Reduction in Limit
Jan 22 2007 6:00 AM	Feb 04 2007 5:00 PM	LONGWOODJCT: L24L::LAMBTON_TS_#2::LONGWOODJCT, L23L29, DL26, L24L::LAMBTON_TS_#2::LONGWOODJCT, T13, KL29, L29C::LAMBTON_TS_#2::LYNWOOD_JCT, L25L26, T2Y, KL29, T2B, PL26, T13J, L26L::LONGWOOD_TS::LONGWOODJCT, T2, L51L29, L26L::LONGWOOD_TS::LONGWOODJCT, T5L	4090418	12 Hour	DWW	To swap L29C and L26L line connections for Lambton at Junction and at Station	FABC BLIP NBLIP	0 to 300 MW 700 MW 700 MW
May 14 2007 5:00 AM	May 17 2007 6:00 PM	Beck #2 TS: KL23, Q23BM::BECK_#2_TS::NEALE_JCT	4328449	4 Hour	CWW	Relay & Interface Replacement - Outage to wire in new tripping relays at Burlington, Beck#2 & Middleport	FETT	450 MW
May 17 2007 6:00 PM	May 17 2007 6:14 PM	Burlington TS: L23L37, 39-Q23BM	4328499	5 Minute	CWW	Test Trip from new Burlington L23L37 Breaker Failure Protection	FETT	450 MW
May 28 2007 7:00 AM	May 31 2007 6:00 PM	Burlington TS: 39-Q23BM	4328539	2 Hour	CWW	To replace Burlington H2L23 Breaker Failure Protection with new C60 Relay's	FETT	0 MW
Jun 04 2007 5:00 AM	Aug 10 2007 7:00 PM	Nanticoke TS: T12, T12-H, T12-F	4416586	36 Hour	CWW	To perform a Nanticoke T12 Oil Dryout/Corrective Repair	NO	NO
Mar 26 2007 5:00 AM	Apr 01 2007 6:00 PM	Detweiler TS: H_BUS, HL22, HL23, D5W::DETWELLER_TS::BUCHANAN_TS, HT2, 19-D5W, D5W::DETWELLER_TS::BUCHANAN_TS, 26-D5W, 26-D5W, HL20	4490537	4 Hour	CWW	Station Construction to connect New Detweiler SC22-H Switch to the H Bus at Detweiler Station Maintenance to in service the new switch P&C to tie New SC22 Protections in to H Bus Protections	FABC	100 to 250 MW
Apr 23 2007 4:00 AM	May 08 2007 6:00 PM	LONGWOODJCT: L24L::LONGWOOD_TS::LONGWOODJCT, W52-L24L, L24L::LONGWOOD_DESN_TS::LONGWOODJCT, L24L::LAMBTON_TS_#2::LONGWOODJCT, L24L::LAMBTON_TS_#2::LONGWOODJCT, 27-L24L, L24L::LONGWOOD_TS::LONGWOODJCT, T14-L24L, L24L::LONGWOOD_DESN_TS::LONGWOODJCT	4550696	Non-Recallable	CWW	Lines Construction to reconfigure circuit outside Lambton	FABC BLIP NBLIP	Apr 23 (4am) - 24 (6am) & Apr. 26 (6pm) - 29 (6pm) 0 to 300 MW 700 MW 700 MW Apr. 24 (6am) - 26 (6pm) 0 to 450 MW 900 MW 900 MW Apr. 29 (6pm) - May 08 (6pm) 0 to 150 500
Apr 02 2007 7:01 AM	May 11 2007 4:01 PM	Scheifele CTS: T1, T1-D6V	4564592	8 Hour	CWW	To Install Containment Pit Around Scheifele T1	NO	NO
May 21 2007 7:01 AM	Jun 29 2007 4:01 PM	Scheifele CTS: T2, T2-D7V	4564672	8 Hour	CWW	Install Containment Pit Around Scheifele T2	NO	NO

Table C9 Toronto Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Purpose	Major Transmission Interface Impacted	Reduction in Limit
Dec 25 2006 7:00 AM	Jan 19 2007 2:30 PM	Bermondsey TS: T4Y, T4B, T4-C14L, T4	2491118	36 Hour	CWW	CMS to do major mtce and oil leak repairs and Doble test on T4 SMS to do major mtce due to FAO readings on T4B	NO	NO
Dec 25 2006 7:00 AM	Jan 20 2007 6:00 PM	Pickering B SS: L27R, P27C::CHERRYWOOD_TS::PICKERING_B_SS, P27C::CHERRYWOOD_TS::PICKERING_B_SS, L26L27, T5L27, KL27	3017187	2 Day	CWW	Both B & A Relays Plus Interface to MUX Replacement	NO	NO
Jan 02 2007 7:00 AM	Jan 23 2007 6:00 PM	Cherrywood TS: P8C::PICKERING_A_SS::CHERRYWOOD_TS, P8C::PICKERING_A_SS::CHERRYWOOD_TS, L8D, KL8, L8L24, T2L8	3048944	2 Day	CWW	Both B & A Relays Plus Interface to MUX Replacement	NO	NO
Dec 25 2006 7:00 AM	Dec 30 2006 6:00 PM	Cherrywood TS: DL6, P6C::CHERRYWOOD_TS::PICKERING_A_SS, L3L6, L6K, T1L6, P6C::CHERRYWOOD_TS::PICKERING_A_SS	3057139	2 Day	CWW	Both B & A Relays Plus Interface to MUX Replacement	NO	NO
Jan 02 2007 7:00 AM	Jan 17 2007 6:00 PM	Pickering A SS: T3L7, P7C::PICKERING_A_SS::CHERRYWOOD_TS, P7C::PICKERING_A_SS::CHERRYWOOD_TS, DL7, L7L11, L7H	3578951	2 Day	CWW	Both B & A Relays Plus Interface to MUX Replacement	NO	NO
Mar 19 2007 8:00 AM	Jun 29 2007 2:00 PM	Clairville TS: W3L510	3953445	5 Hour	CWW	EMD to do major maintenance SI (first weeks) and Hydraulic overhaul (6 weeks)	NO	NO
May 24 2006 12:01 PM	Dec 31 2006 11:59 PM	Vaughan MTS #1: T3-V71RP, T4-V75P	4177382	Non-Recallable	CWW	IESO(DSO) - Vaughan 1	NO	NO
Dec 25 2007 6:00 AM	Dec 25 2007 4:00 PM	Clairville TS: KL76, V76R::REXDALE_TS::WESTMORE_JCT	4313861	4 Hour	CWW	Refill gas buffer zones and reconnect them to H20 and H17. Finish repairing KL76 breaker. Removing drops on V76R air to gas bushings for Hipot. Hipot KL76 breaker via V76R line and terminal	FETT	0
Dec 09 2006 7:00 AM	Jan 31 2007 9:00 PM	Gerrard TS: H3L-22, H1L::MILL_STREET_JCT::GERRARD_TS, H3L-CA, H1L::BASIN_JCT::MILL_STREET_JCT, H1L::BASIN_JCT::MILL_STREET_JCT, H1L::MILL_STREET_JCT::GERRARD_TS, H1L-CA, H3L::BASIN_JCT::MILL_STREET_JCT, H3L::BASIN_JCT::MILL_STREET_JCT, H3L::MILL_STREET_JCT	4402373	5 Day	CWW	For cable diversion.	NO	NO
Mar 19 2007 4:00 AM	May 18 2007 7:00 PM	Clairville TS: T15-SS2, T15, T15-W3, T15-HT15	4418663	36 Hour	CWW	To perform a Clairville TS T15 Oil Dryout/Corrective Repair - REQUIRE 8 WEEK CONTINUOUS OUTAGE	FETT	450
Jan 08 2007 4:00 AM	Mar 09 2007 7:00 PM	Clairville TS: T14-W2, T14, T14-HT14, T14-SS1	4419637	36 Hour	CWW	To perform a Clairville TS T14 Oil Dryout/Corrective Repair - REQUIRE 8 WEEK CONTINUOUS OUTAGE	FETT	450
Apr 02 2007 6:00 AM	Apr 27 2007 7:00 PM	Cherrywood TS: M29C::WHITBY_JCT::CHERRYWOOD_TS, M29C::MERIVALE_TS::ALMONTE_TS, M29C::MERIVALE_TS::ALMONTE_TS, M29C::ALMONTE_TS::WILSON_JCT, M29C::ALMONTE_TS::WILSON_JCT, M29C::WHITBY_JCT::WHITBY_TS, 6-M29C, T4-M29C, M29C::WHITBY_JCT::CHERRYWOOD_TS, M29C-1	4486827	8 Hour	CWW	Line M29C (See Telecom Slip #113072) Modify and replace A & B protection relaying, teleprotection and PLC equipment at Merivale, Oshawa-Wilson and Cherrywood TS. Includes Line traps & CVT's at Cherrywood & Wilson and Line Traps only Whitby TS & Merivale.	NO	NO

Table C10 West Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Purpose	Major Transmission Interface Impacted	Reduction in Limit
Apr 28 2007 6:00 AM	May 04 2007 6:00 PM	Lambton TS #2: D_BUS, T5, T5D, DY, T5-L23, T5D	3848920	4 Hour	CWW	Revenue Metering Partial upgrade (1)	NO	NO
Apr 09 2007 6:00 AM	Apr 16 2007 6:00 PM	Lambton TS #2: T6-P1, T6Y, Y_BUS, T6, DY, T6Y	3848928	4 Hour	CWW	Revenue Metering Partial upgrade (1)	NO	NO
Mar 09 2007 11:00 AM	Mar 23 2007 4:00 PM	Lambton TS #2: 27-L23N, K1-MSO2, P1-MSO3, L23L24, P1-MSO2, L23L24, KL24, PL23, T5-L23, 27-L24L	4016967	4 Hour	CWW	To reterminate the Lambton L23N terminal. To remove strain bus and install rigid bus.	FABC BLIP NBLIP	0 to 300 MW 700 MW 700 MW
Nov 01 2007 7:00 AM	Nov 24 2007 5:00 PM	Lambton TS #2: PS4-1, PS4-2, PS4	4096793	36 Hour	CWW	To perform oil change on Lambton PS4 Phase Shifter		
May 06 2007 6:00 AM	May 06 2007 6:00 PM	Samia Scott TS: L21L27	4300790	4 Hour	CWW	Clearance for Stn Construction to connect bus from L21L27 breaker to L21L27-27 disconnect switch.	NO	NO
Apr 23 2007 6:00 AM	May 06 2007 6:00 PM	Samia Scott TS: L21L27	4300795	Non-Recallable	CWW	Stn Construction to replace oil breaker with new SF6 breaker.	NO	NO
Apr 24 2007 6:00 AM	Apr 26 2007 6:00 PM	Samia Scott TS: 40-N21W	4300798	4 Hour	DWW	Clearance for Stn Construction to remove bushings and interrupters of L21L27 oil breaker.	FABC BLIP NBLIP	0 to 450 MW 900 MW 900 MW
May 22 2007 4:00 AM	Jun 04 2007 5:00 PM	Samia Scott TS: L6L23	4385678	Non-Recallable	CWW	Stn Construction to replace oil breaker with new SF6 breaker.	NO	NO
Jun 11 2007 4:00 AM	Jun 24 2007 5:00 PM	Samia Scott TS: L7L22	4385681	Non-Recallable	CWW	Stn Construction to replace oil breaker with new SF6 breaker.	NO	NO
Sep 17 2007 4:00 AM	Sep 30 2007 5:00 PM	Samia Scott TS: AL3	4385693	Non-Recallable	CWW	Stn Construction to replace oil breaker with new SF6 breaker.	NO	NO
Oct 09 2007 4:00 AM	Oct 22 2007 5:00 PM	Samia Scott TS: AL21	4385723	Non-Recallable	CWW	Stn Construction to replace oil breaker with new SF6 breaker.	NO	NO
Apr 09 2007 4:00 PM	Apr 16 2007 4:00 AM	Lambton TS #2: T6Y, T6-P1, T6	4411992	Non-Recallable	CWW	Replace section of P1 Bus adjacent to T6	NO	NO
Apr 23 2007 4:00 AM	Apr 29 2007 6:00 PM	Samia Scott TS: 40-L25N, 27-L25N, L25N::PETROSAR_JCT::SARNIA_SCOTT_TS, L25N::PETROSAR_JCT::NOVA_CORRUNA_CTS, L25N::NOVA_MOORE_JCT::NOVA_MOORE_CTS, L25N::LAMBTON_TS_#2::NOVA_MOORE_JCT, L25N::LAMBTON_TS_#2::NOVA_MOORE_CTS, L25N::PETROSAR_JCT::NOVA_CORRUNA_	4550741	Non-Recallable	CWW	Lines Construction to reconfigure circuit outside Lambton	FABC BLIP NBLIP	Apr. 23 (4am) - 24 (6am) & Apr. 26 (6pm) - 29 (6pm) 0 to 300 MW 700 MW 700 MW Apr. 24 (6am) - 26 (6pm) 450 MW 900 MW 900 MW
May 09 2007 4:00 AM	May 16 2007 6:00 PM	Lambton TS #2: PS51-1, PS51-1, PS51, L51L29, PL51, L51D::ST.CLAIR_CTS::LAMBTON_TS_#2, PS51-2, PS51-S, PS51-2, L51D::ST.CLAIR_CTS::LAMBTON_TS_#2, PS51-S	4550923	Non-Recallable	CWW	Connect new L51D cable to old L24L Terminal (new L51D terminal). Upgrade buswork and install associated disconnects	FABC BLIP NBLIP Michigan Export Michigan Import	0 to 150 MW 500 MW 500 MW 625 MW 500 MW
Feb 20 2007 6:00 PM	Mar 15 2007 5:30 AM	Lambton TS #2: PS4-2, PS4, PS4-1	4581928	4 Day	CWW	PS4 bypassed for EMD to do oil replacement on PS4 PS4 can be recalled in 4 days . Outage 2	NO	NO
Mar 07 2007 6:00 AM	Mar 08 2007 4:00 PM	Lambton TS #2.K1_BUS Lambton TS #2.P1_BUS	4016944	4 Hours	CWW	To reterminate the Lambton L23N terminal.	FABC BLIP NBLIP	0 to 150 MW 500 MW 500 MW
Mar 24 2007 6:00 AM	Mar 25 2007 4:00 PM	Lambton TS #2.L23N_Terminal Lambton TS #2.L24L_Terminal L24L	4017011	4 Hours	CWW	To reterminate the Lambton L24L terminal	FABC BLIP NBLIP	0 to 300 MW 700 MW 700 MW
Mar 26 2007 6:00 AM	Mar 27 2007 4:00 PM	Lambton TS #2.K1_BUS Lambton TS #2.P1_BUS Lambton TS #2.T6	4017056	4 Hours	CWW	To reconnect section of the P1 BUS AND THE K1 BUS Remove temporary bypass from P1 BUS to T6	FABC BLIP NBLIP	0 to 150 + 100 to 250 MW 500 MW 500 MW
Mar 28 2007 6:00 AM	Mar 29 2007 4:00 PM	Lambton TS #2.L23N_Terminal Lambton TS #2.K1_BUS L23N Lambton TS #2.T5	4017071	4 Hours	CWW	To reconnect section of the K1 BUS and reterminate L23N to permanent position. Remove temporary bypass from circuit L23N to T5	FABC BLIP NBLIP	0 to 300 + 100 to 250 MW 700 MW 700 MW
Apr 16 2007 4:00 AM	Apr 16 2007 4:00 PM	Lambton TS #2.P1_BUS Lambton TS #2.T6	4412071	4 Hours	CWW	Reconnect section of P1 Bus	NO	NO
Apr 28 2007 4:00 AM	Apr 28 2007 4:00 PM	Lambton TS #2.K1_BUS Lambton TS #2.T5	4412102	4 Hours	CWW	Remove section of K1 Bus	FABC BLIP NBLIP	0 to 300 MW 700 MW 700 MW
May 04 2007 4:00 AM	May 04 2007 4:00 PM	Lambton TS #2.K1_BUS Lambton TS #2.T5	4412194	4 Hours	CWW	Connect K1 Bus to T5	FABC BLIP NBLIP	0 to 150 MW 500 MW 500 MW
Apr 09 2007 4:00 AM	Apr 09 2007 4:00 PM	Lambton TS #2.P1_BUS	4411935	4 Hours	CWW		NO	NO

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