

**18-MONTH OUTLOOK:**

# An Assessment of the Reliability of the Ontario Electricity System

From July 2006 to December 2007



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## Executive Summary

Actions over the past year, including new generating capacity, transmission upgrades and new market mechanisms, have improved the outlook for Ontario's overall reliability picture for the summer of 2006 as compared to last summer. Under the Normal Weather demand scenario, there are sufficient resources forecast within Ontario to meet expected requirements for 51 of the 79 weeks covered in this Outlook. However, there are many periods during the summer and under extreme weather conditions when the system will be strained and it is expected that Ontario will need to rely on additional supplies from outside the province.

Looking ahead to 2007, timely in service of the Goreway Station Phase 1 (485 MW) will help meet the increase in Ontario demand for the summer. Current plans for generator outages may need to be revised in order to manage adequacy needs for the 2007 summer, and in other periods when reserve above requirement values are negative. It is expected that some generator owners will reschedule their outages in response to this Outlook, and subsequent Outlook reports will incorporate the impact of those scheduling changes.

Since the last 18-Month Outlook was released in March, 2006, preliminary site work has started on the 550 MW Portlands Energy Centre in Toronto. The schedule is to have 330 MW in service no later than the summer of 2008.

Another change of note from the previous Outlook is an expected delay to the completion date for work to address transmission limitations experienced over the summer of 2005 from the Niagara region into the Hamilton-Burlington area. The limitations affected both the use of available Ontario generation and imports into the province during hot weather, high demand periods.

The demand forecast is similar to that of the previous Outlook. Continuing pressures in the manufacturing and some other primary sectors has led to a modest reduction in the demand growth over the forecast horizon. 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)
Summer 2006	25,573	27,278
Winter 2006-07	24,973	25,826
Summer 2007	25,916	27,622

Energy demand is expected to be 155.5 terawatt hours (TWh) for 2006, an increase of 0.5 percent increase over the weather corrected energy demand for 2005 (154.7 TWh). Energy demand is forecast to increase by 1.7% in 2007 to reach 158.1 TWh.

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 July, 2006 to December, 2007 utilizing the most up to date forecast information and taking into account experience gained from past operations. The 18-Month Outlook is intended for operational planning purposes, and for the scheduling of generator outage plans. To avoid creating unacceptably low reserves, it is an important part of the overall operational planning process that participants adjust their maintenance activities to periods where available resources exceed requirements.

The IESO also regularly publishes the Ontario Reliability Outlook, which monitors and reports on the progress of infrastructure developments, and their impact on future reliability beyond the 18 month horizon. The Ontario Reliability Outlook focuses more on long-term infrastructure plans and requirements, while the 18-Month Outlook focuses more on operational planning.

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# 1.0 Introduction

This Outlook covers the 18-month period from July 2006 to December 2007. It supersedes the report titled “An Assessment of the Reliability of the Ontario Electricity System from April 2006 to September 2007”, dated March 24, 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 July 2006 to December 2007” (IESO\_REP\_0307) (found on the IESO web site at [http://www.ieso.ca/imoweb/pubs/marketReports/18Month\\_ODF\\_2006jun.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/18Month_ODF_2006jun.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\\_2006jun.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/Methodology_RTAA_2006jun.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\\_2006jun.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/OntTxSystem_2006jun.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](mailto: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 judgement 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 to 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 supersede information presented in this report.

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## 2.0 Updates to This Outlook

### 2.1 Changes to Forecast Peak Demand

The demand models have been updated to include the actual demand, weather and economic experience through March and re-estimated based on that information. The economic outlook and weather scenarios have been updated based on the most recent data. The updated demand forecast is slightly lower than the previous due to continuing weakness in some sectors of the Ontario economy.

### 2.2 Updates to Resources

Since the previous Outlook report was published, the runner upgrade to Caribou Unit 2 and the main transformer replacement increased the Caribou station's capacity by 4 MW.

The following wind farms are at an advanced stage of commissioning and are expected to complete their commissioning by end of June 2006:

- Amaranth Wind Generating Station (formerly Melancthon Grey Wind Project) – 67.5 MW
- Kingsbridge Wind Power Project – 39.6 MW
- Port Burwell Wind Generating Station (formerly Erie Shores Wind Farm) – 99 MW

There have also been updates to the generator outages submitted by market participants.

### 2.3 Updates to Transmission Outlook

The list of transmission projects and planned and forced transmission outages has been updated from the previous 18-Month Outlook.

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

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## 3.0 Demand Forecast

The forecast of demand has been updated to reflect the most recent information. As part of the regular updating process, the forecasting models' equations are re-estimated based on recent economic, weather and demand data. We have also updated the Weather scenarios for the most recent weather data. The economic outlook has been updated and the main themes have not changed from the previous outlook.

- High energy prices and a high dollar continue to negatively impact Ontario's industry.
- Low interest rates continue to fuel consumption, business investment and construction.
- Overall, the economic outlook is slightly lower.

The demand forecast methodology is unchanged from the previous forecast. The demand forecasts are based on Monthly Normal weather.

Annual energy demand is expected to grow by 0.5% and 1.7% in 2006 and 2007. The summer 2006 Monthly Normal peak demand is expected to be just below 25,400 MW. The Monthly Normal winter 2006-07 peak will fall just short of 24,800 MW. The growth in energy and peak demands varies across the zones due to local demographic and economic factors that influence demand.

### 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. We focus on two demand forecast scenarios, which are based on:

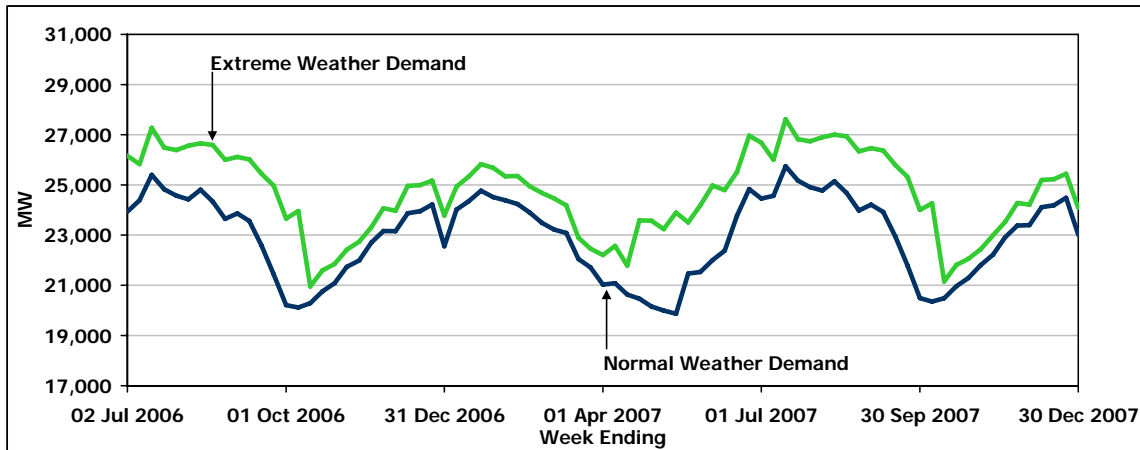
- Monthly Normal weather; and
- Extreme weather.

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.

Conservation has occurred throughout the history used to forecast energy and peak demand. As such, these naturally occurring reductions are reflected in the demand forecast. However, higher levels of conservation or demand management are possible but 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 these Outlooks when the results become more concrete. This forecast does not take into account government targets for energy conservation.

Figure 3.1 shows the Monthly Normal and Extreme weather demands assumed for each week in the study period.

Figure 3.1 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 reliability on the system.

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## 4.0 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 Planned Resource Scenario and the Existing Resource Scenario.

The Planned Resource Scenario assumes quantities of price-responsive demand and generation capacity based on existing resources and estimates of in-service dates for new projects.

The Existing Resource Scenario considers the potential for delays to the in-service dates of additional new generation capacity and of price-responsive demand by being based on current levels only. However, this scenario does assume small generation capacity increases to some existing nuclear generation facilities.

Results of the adequacy assessment, as well as an analysis of risk factors, are described in Sections 4.1 through 4.5. Observations, findings and conclusions are provided in Section 6, and detailed tables of results can be found in Appendix A of this document.

### 4.1 Planned Resource Scenario with Normal and Extreme Weather

#### Resource Assumptions

The Planned Resource Scenario assumes quantities of price-responsive demand 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:

- Existing Installed Resources: total capacity of 30,770 MW(refer to Table 4.1)
  - Assumed to be in-service for the entire duration of the study period, except for periods of time that the generator owner/operator has submitted planned outages for their generating units.
- Changes to generation facilities and capacity changes to the existing facilities expected to be effective within the 18-month study period (refer to Table 4.2)
  - Includes generation projects in the IESO's Connection Assessment and Approval Process (CAA)<sup>1</sup> that are under construction, embedded generators that are registered to participate in the market, and projects selected under the Ontario Power Authority's RFP process.
  - "The estimated effective date shown in Table 4.2 indicates the estimated date on which additional capacity is assumed to be available to meet Ontario demand. For projects that are under RFP contract, the estimate effective date is the best estimate of the date when the contract requires the additional capacity to be available. In the event that an RFP project is delayed, such that the commercial in-service date is expected to be later than the RFP contract date, the "Estimated

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<sup>1</sup> 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](http://www.ieso.ca) under the "Services - Connection Assessments" link.

Effective Date” will be the best estimate of the commercial in-service date for the project.”

- Price-responsive demand forecast:
  - Table 4.3 summarizes the changes to the price-responsive demand capacity over the course of the forecast.
  - Based on historical data, it is assumed that 56.4% of price responsive demand is available at the time of the weekly peak.
  - The Transitional Demand Response Program is expected to end by March 2007.

**Table 4.1 Existing Installed Generation Resources**

Fuel Type	Total Capacity (MW)	Number of Stations
Nuclear	11,397	5
Coal	6,434	4
Oil / Gas	5,103	22
Hydroelectric	7,768	68
Miscellaneous	68	3
<b>Total</b>	<b>30,770</b>	<b>102</b>

**Table 4.2 Committed and Contracted Generation Resources**

Proponent/Project Name	Zone	Fuel Type	Capacity MW	Estimated Effective Date
Nuclear Uprate	N/A	Uranium	16	2006-Q2
Hamilton Community Digester Energy	Southwest	Sewage	1.6	Summer 2006
Prince Wind Farm	Northeast	Wind	99	2006
Nuclear Uprate	N/A	Uranium	5	2006-Q4
Trail Road Landfill Gas	Ottawa	Landfill Gas	5	Early 2007
Underwood WGS (formerly Leader Wind Power Projects A & B)	Southwest	Wind	199.7	Early 2007
Amaranth II WGS (formerly Melancthon II Wind Project)	Southwest	Wind	132	2007
Goreway Station Phase I	Toronto	Gas	485	Summer 2007
Blue Highlands Wind Farm	Southwest	Wind	49.5	Summer 2007
Nuclear Uprate	N/A	Uranium	27	2007-Q3
Ripley Wind Power Project	Southwest	Wind	76	2007-Q4
<b>Total</b>			<b>1,096</b>	



Table 4.3 Demand Side Projects

Project	Type	Zone	Capacity MW	Estimated In-Service Date
Demand Response	Dispatchable Demand	Northwest	40	2006-Q3
Demand Response	Dispatchable Demand	Southwest	30	2006-Q3
Demand Response	Dispatchable Demand	Northeast	25	2006-Q4
Demand Response	Dispatchable Demand	Northeast	10	2007-Q1
Demand Response	Dispatchable Demand	Northeast	100	2007-Q1
Transitional Demand Response Program	Dispatchable Demand	Distributed	-31	2007-Q2
<b>Total</b>			<b>174</b>	

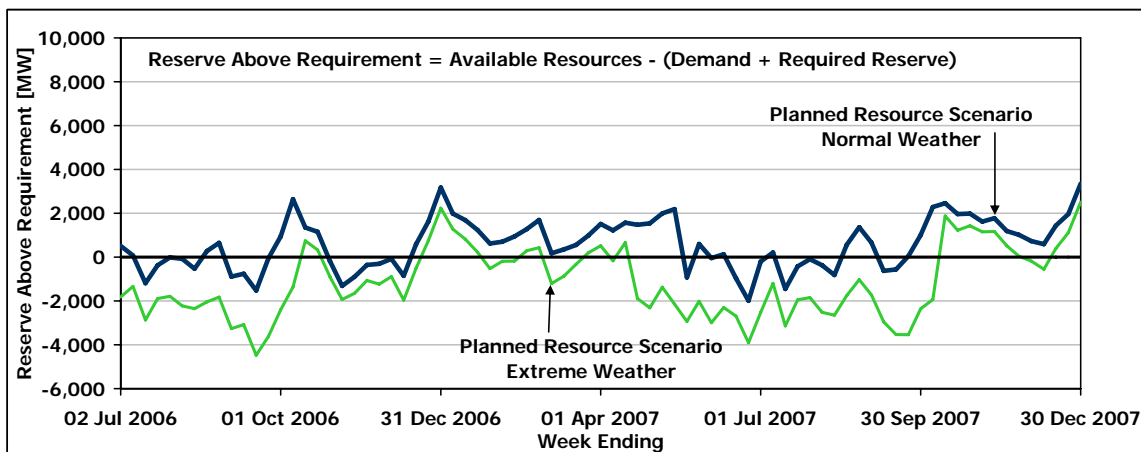
With respect to forecasts of generation capabilities, the assumptions are as follows:

- 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 participants submissions, including planned outages, expected forced outage rates and seasonal deratings
- Capacity at the time of 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 4.1.

Figure 4.1 Reserve Above Requirement: Planned Resource Scenario – Normal vs. Extreme Weather



## 4.2 Existing Resource Scenarios with Normal and Extreme Weather

### Resource Assumptions

The Existing Resource Scenario assumes quantities of price-responsive demand and generation capacity based on existing resources and capacity increases to the existing generation facilities. This includes:

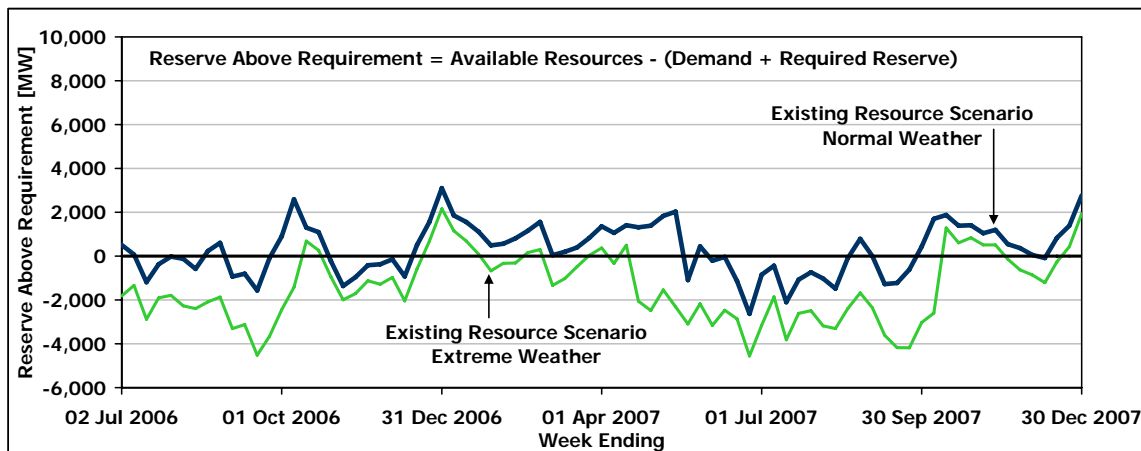
- Existing Installed Resources: total capacity of 30,770 MW(refer to Table 4.1)
  - Assumed to be in-service for the entire duration of the study period, except for periods of time that the generator owner/operator has submitted planned outages for their generating units.
- Capacity increases to the existing facilities expected to be in-service within the 18-month study period (refer to Table 4.2)
- Price-responsive demand forecast:
  - 333 MW of price-responsive demand capability up until March 2007 and 307 MW for the remainder of the period.

With respect to forecasts of generation capabilities, the existing 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 4.2.

**Figure 4.2 Reserve Above Requirement: Existing Resource Scenario – Normal vs. Extreme Weather**



### 4.3 Comparison of Resource Scenarios

Table 4.4 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 installed resources in Table 4.4 start with the values listed in Table 4.1. The installed resources in Table 4.4 increase over the study timeframe, due to some increases in the forecast net installed capacity of existing generation facilities. For the Planned Resource Scenario only, resources are also increased by the generation additions listed in Table 4.2. The total reductions to resources include generator deratings, generator planned outages under each resource scenario, capacity limitations due to

transmission interface constraints and allowances for hydroelectric generation production below rated capacity. The total reductions were subtracted and the price-responsive demand was added to the total resources, to obtain the available resources. In this Outlook, price-responsive demand ranges from 338 MW to a maximum of 454 MW under the Planned Resource Scenario, as shown in Table 4.4.

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

**Table 4.4 Summary of Available Resources**

Notes	Description \ Year	Summer Peak 2006		Winter Peak 2007		Summer Peak 2007	
		Existing Resource Scenario	Planned Resource Scenario	Existing Resource Scenario	Planned Resource Scenario	Existing Resource Scenario	Planned Resource Scenario
1	Installed Resources (MW)	30,992	30,992	30,997	31,098	30,994	31,966
2	Imports (MW)	0	0	0	0	0	0
3	Total Resources (MW)	30,992	30,992	30,997	31,098	30,994	31,966
4	Total Reductions in Resources (MW)	3,015	3,015	2,045	2,135	3,508	3,947
5	Price-responsive Demand (MW)	333	338	333	454	307	423
6	Available Resources (MW)	28,310	28,315	29,285	29,416	27,793	28,442

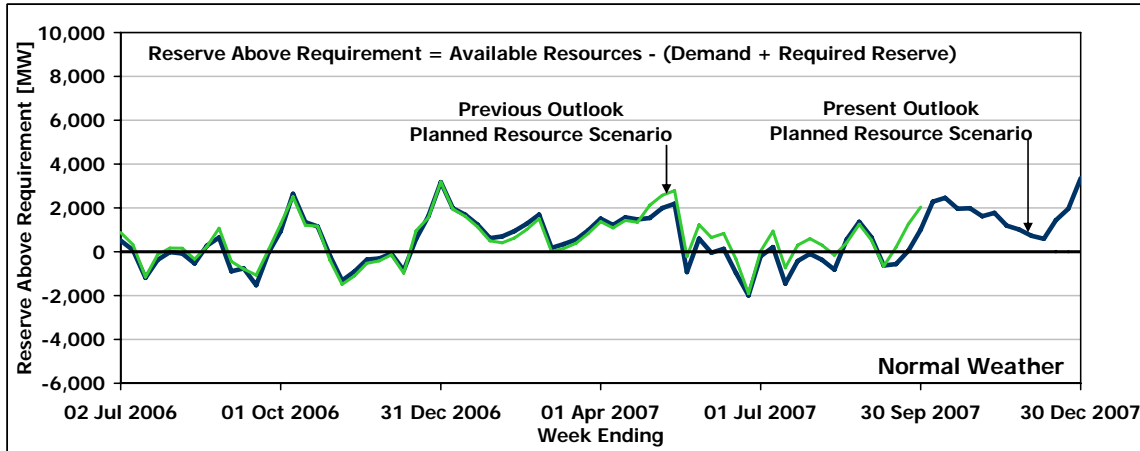
**Notes to Table 4.4:**

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. It also reflects any minor unit re-ratings resulting from equipment changes that may have been completed prior to the publication of this Outlook. 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, under each of the two scenarios, the sum of generator deratings, generator planned outages under each resource scenario, generation limitations due to transmission interface constraints and allowances for hydroelectric generation production below rated capacity.
5. Price-responsive Demand: This is the amount of demand which is assumed to respond to changes in the market clearing price by reducing consumption, under each resource scenario.
6. Available Resources (MW): This equals Total Resources (line 3) minus Total Reductions in Resources (line 4) plus Price-responsive Demand (line 5).

**Weekly Adequacy Assessments**

Figures 4.3 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 March 24, 2006.

**Figure 4.3 Reserve Above Requirement: Planned Resource Scenario vs. Previous Planned Resource Scenario**



#### 4.4 Resource Adequacy Risks

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

##### 4.4.1 Extreme Weather

The Existing 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 July 2005, when Ontario established an all-time record demand of 26,160 MW. Approximately 1,600 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 Existing 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.

#### 4.4.2 New Resource Risks

For the 18 month period under study, the improved demand-supply situation for the Planned Resource Scenario is dependent on the additional generation and price-responsive demand 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 implementation of the new facilities.

#### 4.4.3 Extensions to Generator Planned Outages

A number of large generating units are scheduled to return to service from outage prior to summer 2006/2007 and winter 2007/2008. 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.

#### 4.4.4 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.

#### 4.4.5 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.

#### 4.4.6 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.

#### 4.4.7 Transmission Constraining Resource Utilization

There is a risk, as experienced this past summer, 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. This can affect the utilization of internal generation and imports from neighbouring systems.

#### 4.4.8 Failure of Import Transactions

There is a risk, as experienced this past summer, that import transactions scheduled with neighbouring markets frequently 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 1 provides more certainty that these imports will be delivered in real-time.

**- End of Section -**

## 5.0 Transmission Reliability Assessment

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

### 5.1 Transmission Projects

Planned transmission projects, that are identified by transmitters and that have a significant impact and that have an estimated in-service date within the 18 month period under study are listed in Appendix B by transmission zone. These transmission projects do not include all transmission projects submitted to the IESO for Connection Assessments and Approval. Only those projects that are considered significant are included. To make cross referencing easier, the CAA-ID number of each project has been included where available. In general, the work listed represents some or all of the work associated with the CAA-ID.

Additional information regarding each of the transmission projects in the CAA queue can be found at the IESO's [Connection Assessments](http://www.ieso.ca/imoweb/connAssess/ca.asp) web-page, at the following location:  
<http://www.ieso.ca/imoweb/connAssess/ca.asp>.

### 5.2 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 4.1, 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 the first week in May 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. 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 few 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.

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 the Ontario Reliability Outlook and this 18-Month assessment will require a substantial number of planned outages to incorporate the new facilities. It is still early in the development of many of these plans to identify specific outage requirements. However one project, the Lambton switchyard reconfiguration, is far enough advanced that outage plans must be considered in this Outlook. 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 to connect the new generation facilities, and to manage the expected short circuit levels when new generation facilities at St. Clair Power and Greenfield Energy Centre begin their commissioning activities, at the same time that generating units at Lambton continue to operate. 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.

Additional 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. Where feasible, the impact of these specific transmission outages for this specific transmission work activity has been reflected in lower availability of Lambton generation. The reserve above requirement values will also be lower, as a result.

### **5.3 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.

IESO Outlooks in 2005 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. In some cases this is expected to result in congestion of low-priced resources that must be replaced by higher priced resources, and will increase costs to market loads. In other, more critical cases, where the loading is projected to exceed the capability of the transmission facilities, there is an increased risk of load interruptions.



IESO has been working with Hydro One, 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 2006. 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 2006, the following areas of the grid are expected to be improved over last summer, and to provide an increased level of reliability.

### 5.3.1 City of Toronto and Western GTA

The ability to supply load in the Greater Toronto Area (GTA) was challenging in summer 2005. Transmission capability into the GTA has been enhanced with the addition of the second 500/230kV, 750 MVA auto-transformer at Parkway TS in the fall of 2005, a 240 Mvar shunt capacitor at Essa TS and the planned removal of deratings on a 500/230 kV 750 MVA autotransformer at Trafalgar TS. The restoration of the normal rating at Trafalgar is expected to provide sufficient capability at the station for the expected conditions.

An autotransformer at Cherrywood also has a significant derating, and currently is scheduled to be replaced in the fall of 2006. This schedule is considered marginally acceptable given the current forecasts and the availability of an additional Pickering unit over last summer.

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.

### 5.3.2 Beck-Middleport-Hamilton/Burlington circuits (QFW)

The present Niagara transmission expansion project will add a new 230 kV double-circuit line between Allanburg TS, in the Niagara peninsula, and Middleport TS southwest of Hamilton. Hydro One has advised the IESO that the project, originally scheduled for June 2006, is now delayed due to unforeseen circumstances. 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.

### 5.3.3 St. Lawrence to Hinchinbrooke

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 at St. Lawrence is planned to be enhanced and be available under peak load conditions to maximize simultaneous import capability from Hydro Quebec and New York. This change is targeted for summer 2006.

### 5.3.4 Michigan Phase Angle Regulators

Phase angle regulators are in service 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 equipment resulted in significant congestion of imports from the Michigan direction in summer 2005. For summer 2006, the IESO, the Midwest ISO, Hydro One and International Transmission Company, have agreed to temporarily bypass the phase angle regulators for normal operation until an agreement is reached to make full use of their regulating capability. This is expected to increase Ontario's transfer capability to and from Michigan by 300 to 350 MW in the summer.

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.

**- End of Section -**

## 6.0 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 51 of 79 Weeks in the study period. Reserves are forecast to be below requirements for twenty-eight weeks of the Outlook timeframe. Where this situation occurs, Ontario may need to rely on external supplies. During other periods and in summer 2007 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 Existing Resource-Normal Weather Scenario, the reserves are forecast to be below requirements for thirty-three 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 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.

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

- The magnitude of resource deficiencies under both normal and extreme weather emphasizes the continued need for reliable supply 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 price-responsive demand coming into the market as forecast.
- A number of large generating units are scheduled to return to service from outage prior to the summer 2006/2007 and winter 2007/2008. 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:

Increase the certainty of market mechanisms:

- Day Ahead Commitment Process, to allow imports to be scheduled and to commit units day ahead, like the markets surrounding Ontario, was started on June 1
- Emergency Load Reduction Program, to give consumers incentives to reduce their loads, like the markets surrounding Ontario, will commence on June 20

**Transmission Adequacy**

- The Ontario transmission system is expected to be adequate to supply the coming summer's demand under the forecast conditions.
- Transmission capability into the GTA has been enhanced with the addition of the second 500/230kV, 750 MVA auto-transformer at Parkway TS in the fall of 2005, a 240 Mvar shunt capacitor at Essa TS and the planned removal of deratings on a 500/230 kV 750 MVA autotransformer at Trafalgar TS. Transformer limitations at the Cherrywood station are planned to be corrected in the fall of 2006.
- The John TS to Esplanade TS link, scheduled for the fall of 2007, will enhance reliability to Central Toronto loads by providing an alternate supply to some of these loads.
- The Niagara transmission expansion project is now delayed due to unforeseen circumstances. 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 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.
- Phase angle regulators are in service 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. For summer 2006, the IESO, the Midwest ISO, Hydro One and International Transmission Company, have agreed to

temporarily bypass the phase angle regulators for normal operation until an agreement is reached to make full use of their regulating capability. This is expected to increase Ontario's transfer capability to and from Michigan by 300 to 350 MW in the summer.

- A significant increase in the combined import capability from New York and Michigan will be available when full regulating capability on the Michigan interface is achieved and the Niagara expansion project is completed.

**- End of Section -**

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# Appendix A Resource Adequacy Assessment Details

**Table A1 Assessment of Resource Adequacy: Normal Weather,  
Existing Resource Scenario**

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Price-responsive Demand MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
02-Jul-06	30,992	3,280	333	28,045	27,535	17.2	4,111	15.1	3,601	510
09-Jul-06	30,992	3,210	333	28,115	28,048	15.3	3,725	15.0	3,658	67
16-Jul-06	30,992	3,015	333	28,310	29,503	11.5	2,913	16.2	4,106	-1,193
23-Jul-06	30,992	2,994	333	28,331	28,705	14.1	3,502	15.6	3,876	-374
30-Jul-06	30,992	2,984	333	28,341	28,368	15.3	3,770	15.5	3,797	-27
06-Aug-06	30,992	3,236	333	28,089	28,211	15.0	3,659	15.5	3,781	-122
13-Aug-06	30,992	3,248	333	28,077	28,657	13.2	3,272	15.5	3,852	-580
20-Aug-06	30,992	2,998	333	28,327	28,094	16.4	3,987	15.4	3,754	233
27-Aug-06	30,992	3,503	333	27,822	27,215	17.7	4,174	15.1	3,567	607
03-Sep-06	30,992	4,785	333	26,540	27,471	11.2	2,677	15.1	3,608	-931
10-Sep-06	30,992	4,770	333	26,555	27,355	12.7	2,988	16.1	3,788	-800
17-Sep-06	30,992	6,735	333	24,590	26,161	8.9	1,999	15.8	3,570	-1,571
24-Sep-06	30,992	6,388	333	24,937	25,024	16.3	3,498	16.7	3,585	-87
01-Oct-06	30,992	6,645	333	24,680	23,781	22.1	4,469	17.7	3,570	899
08-Oct-06	30,992	5,293	333	26,032	23,444	29.4	5,916	16.5	3,328	2,588
15-Oct-06	30,992	6,799	333	24,526	23,230	20.9	4,242	14.5	2,946	1,296
22-Oct-06	30,992	6,441	333	24,884	23,788	19.9	4,126	14.6	3,030	1,096
29-Oct-06	30,992	7,202	333	24,123	24,365	14.4	3,034	15.5	3,276	-242
05-Nov-06	30,997	7,644	333	23,686	25,055	9.0	1,952	15.3	3,321	-1,369
12-Nov-06	30,997	7,074	333	24,256	25,216	10.3	2,268	14.7	3,228	-960
19-Nov-06	30,997	5,799	333	25,531	25,949	12.5	2,832	14.3	3,250	-418
26-Nov-06	30,997	5,185	333	26,145	26,511	12.9	2,982	14.5	3,348	-366
03-Dec-06	30,997	5,178	333	26,152	26,299	12.9	2,996	13.6	3,143	-147
10-Dec-06	30,997	5,025	333	26,305	27,230	10.2	2,433	14.1	3,358	-925
17-Dec-06	30,997	3,601	333	27,729	27,220	15.8	3,780	13.7	3,271	509
24-Dec-06	30,997	2,114	333	29,216	27,665	20.6	4,996	14.2	3,445	1,551
31-Dec-06	30,997	2,202	333	29,128	26,025	29.1	6,573	15.4	3,470	3,103
07-Jan-07	30,997	2,067	333	29,263	27,409	21.9	5,247	14.1	3,393	1,854
14-Jan-07	30,997	2,040	333	29,290	27,735	20.3	4,940	13.9	3,385	1,555
21-Jan-07	30,997	2,045	333	29,285	28,179	18.2	4,517	13.8	3,411	1,106
28-Jan-07	30,997	2,881	333	28,449	27,966	16.1	3,937	14.1	3,454	483
04-Feb-07	30,997	2,934	333	28,396	27,829	16.4	4,004	14.1	3,437	567
11-Feb-07	30,997	2,905	333	28,425	27,611	17.3	4,182	13.9	3,368	814
18-Feb-07	30,997	2,924	333	28,406	27,255	18.8	4,501	14.0	3,350	1,151
25-Feb-07	30,844	2,846	333	28,331	26,773	20.6	4,845	14.0	3,287	1,558
04-Mar-07	30,844	4,565	333	26,612	26,567	14.6	3,396	14.4	3,351	45
11-Mar-07	30,844	4,565	333	26,612	26,418	15.3	3,523	14.4	3,329	194
18-Mar-07	30,844	5,463	333	25,714	25,318	16.6	3,666	14.8	3,270	396
25-Mar-07	30,844	5,463	333	25,714	24,882	18.4	4,000	14.6	3,168	832

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 supersede information presented in this report.

(Table A1 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Price-responsive Demand MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
01-Apr-07	30,844	5,463	333	25,714	24,356	22.3	4,689	15.8	3,331	1,358
08-Apr-07	30,844	5,642	307	25,509	24,451	21.0	4,419	15.9	3,361	1,058
15-Apr-07	30,844	5,663	307	25,488	24,082	23.5	4,856	16.7	3,450	1,406
22-Apr-07	30,844	6,138	307	25,013	23,697	22.3	4,552	15.8	3,236	1,316
29-Apr-07	30,844	6,582	307	24,569	23,184	21.9	4,410	15.0	3,025	1,385
06-May-07	30,844	6,199	307	24,952	23,122	24.8	4,955	15.6	3,125	1,830
13-May-07	30,844	6,179	307	24,972	22,945	25.7	5,109	15.5	3,082	2,027
20-May-07	30,844	7,634	307	23,517	24,607	9.6	2,052	14.6	3,142	-1,090
27-May-07	30,844	5,674	307	25,477	25,040	18.3	3,944	16.3	3,507	437
03-Jun-07	30,844	5,936	307	25,215	25,428	14.6	3,215	15.6	3,428	-213
10-Jun-07	30,844	5,448	307	25,703	25,738	14.9	3,326	15.0	3,361	-35
17-Jun-07	30,844	4,953	307	26,198	27,333	10.2	2,428	15.0	3,563	-1,135
24-Jun-07	30,844	4,953	307	26,198	28,835	5.5	1,361	16.1	3,998	-2,637
01-Jul-07	30,844	3,922	307	27,229	28,076	11.3	2,772	14.8	3,619	-847
08-Jul-07	30,994	3,508	307	27,793	28,232	13.1	3,228	14.9	3,667	-439
15-Jul-07	30,994	3,508	307	27,793	29,896	8.0	2,052	16.1	4,155	-2,103
22-Jul-07	30,994	3,297	307	28,004	29,082	11.3	2,832	15.5	3,910	-1,078
29-Jul-07	30,994	3,297	307	28,004	28,745	12.4	3,090	15.4	3,831	-741
05-Aug-07	30,868	3,594	307	27,581	28,599	11.3	2,810	15.5	3,828	-1,018
12-Aug-07	30,868	3,594	307	27,581	29,058	9.7	2,435	15.6	3,912	-1,477
19-Aug-07	30,868	2,850	307	28,325	28,419	14.8	3,643	15.1	3,737	-94
26-Aug-07	30,868	2,850	307	28,325	27,540	18.1	4,342	14.8	3,557	785
02-Sep-07	30,868	3,385	307	27,790	27,786	14.8	3,578	14.8	3,574	4
09-Sep-07	30,868	4,731	307	26,444	27,722	10.6	2,527	15.9	3,805	-1,278
16-Sep-07	30,868	5,952	307	25,223	26,446	10.0	2,284	15.3	3,507	-1,223
23-Sep-07	30,868	6,468	307	24,707	25,326	13.4	2,922	16.3	3,541	-619
30-Sep-07	30,868	6,871	307	24,304	23,873	18.6	3,806	16.5	3,375	431
07-Oct-07	30,868	6,083	307	25,092	23,388	23.3	4,741	14.9	3,037	1,704
14-Oct-07	30,868	5,737	307	25,438	23,562	24.2	4,948	15.0	3,072	1,876
21-Oct-07	30,868	5,737	307	25,438	24,055	21.4	4,478	14.8	3,095	1,383
28-Oct-07	30,868	5,221	307	25,954	24,548	21.9	4,659	15.3	3,253	1,406
04-Nov-07	30,868	5,160	307	26,015	24,973	19.3	4,216	14.6	3,174	1,042
11-Nov-07	30,868	4,590	307	26,585	25,389	19.7	4,367	14.3	3,171	1,196
18-Nov-07	30,868	4,590	307	26,585	26,042	16.0	3,671	13.7	3,128	543
25-Nov-07	30,868	4,115	307	27,060	26,701	15.8	3,682	14.2	3,323	359
02-Dec-07	30,868	4,600	307	26,575	26,525	13.6	3,177	13.4	3,127	50
09-Dec-07	31,018	3,977	307	27,348	27,435	13.4	3,234	13.8	3,321	-87
16-Dec-07	31,018	2,946	307	28,379	27,547	17.3	4,188	13.9	3,356	832
23-Dec-07	31,018	2,069	307	29,256	27,870	19.5	4,767	13.8	3,381	1,386
30-Dec-07	31,018	2,148	307	29,177	26,408	26.8	6,162	14.7	3,393	2,769



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

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Price-responsive Demand MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
02-Jul-06	30,992	3,280	338	28,050	27,535	17.2	4,116	15.1	3,601	515
09-Jul-06	30,992	3,210	338	28,120	28,048	15.3	3,730	15.0	3,658	72
16-Jul-06	30,992	3,015	338	28,315	29,503	11.5	2,918	16.2	4,106	-1,188
23-Jul-06	30,992	2,994	338	28,336	28,705	14.1	3,507	15.6	3,876	-369
30-Jul-06	30,992	2,984	338	28,346	28,368	15.4	3,775	15.5	3,797	-22
06-Aug-06	30,994	3,238	378	28,133	28,211	15.2	3,703	15.5	3,781	-78
13-Aug-06	30,994	3,250	378	28,121	28,657	13.4	3,316	15.5	3,852	-536
20-Aug-06	30,994	3,000	378	28,371	28,094	16.6	4,031	15.4	3,754	277
27-Aug-06	30,994	3,505	378	27,866	27,215	17.8	4,218	15.1	3,567	651
03-Sep-06	30,994	4,787	378	26,584	27,471	11.4	2,721	15.1	3,608	-887
10-Sep-06	30,994	4,772	378	26,599	27,355	12.9	3,032	16.1	3,788	-756
17-Sep-06	30,994	6,737	378	24,634	26,161	9.0	2,043	15.8	3,570	-1,527
24-Sep-06	30,994	6,390	378	24,981	25,024	16.5	3,542	16.7	3,585	-43
01-Oct-06	30,994	6,647	378	24,724	23,781	22.3	4,513	17.7	3,570	943
08-Oct-06	31,093	5,384	378	26,086	23,444	29.7	5,970	16.5	3,328	2,642
15-Oct-06	31,093	6,890	378	24,580	23,230	21.2	4,296	14.5	2,946	1,350
22-Oct-06	31,093	6,532	378	24,938	23,788	20.1	4,180	14.6	3,030	1,150
29-Oct-06	31,093	7,293	378	24,177	24,363	14.6	3,088	15.5	3,274	-186
05-Nov-06	31,098	7,734	378	23,741	25,054	9.2	2,007	15.3	3,320	-1,313
12-Nov-06	31,098	7,164	378	24,311	25,214	10.6	2,323	14.7	3,226	-903
19-Nov-06	31,098	5,889	378	25,586	25,948	12.7	2,887	14.3	3,249	-362
26-Nov-06	31,098	5,276	378	26,199	26,510	13.1	3,036	14.5	3,347	-311
03-Dec-06	31,098	5,269	392	26,220	26,297	13.2	3,064	13.6	3,141	-77
10-Dec-06	31,098	5,116	392	26,373	27,228	10.5	2,501	14.1	3,356	-855
17-Dec-06	31,098	3,692	392	27,797	27,218	16.1	3,848	13.7	3,269	579
24-Dec-06	31,098	2,205	392	29,284	27,665	20.9	5,064	14.2	3,445	1,619
31-Dec-06	31,098	2,293	392	29,196	26,025	29.4	6,641	15.4	3,470	3,171
07-Jan-07	31,098	2,158	454	29,393	27,409	22.4	5,377	14.1	3,393	1,984
14-Jan-07	31,098	2,131	454	29,420	27,735	20.8	5,070	13.9	3,385	1,685
21-Jan-07	31,098	2,135	454	29,416	28,179	18.8	4,648	13.8	3,411	1,237
28-Jan-07	31,098	2,971	454	28,580	27,965	16.6	4,068	14.1	3,453	615
04-Feb-07	31,098	3,025	454	28,526	27,828	17.0	4,134	14.1	3,436	698
11-Feb-07	31,103	3,001	454	28,555	27,610	17.8	4,312	13.9	3,367	945
18-Feb-07	31,103	3,020	454	28,536	27,255	19.4	4,631	14.0	3,350	1,281
25-Feb-07	30,950	2,942	454	28,461	26,773	21.2	4,975	14.0	3,287	1,688
04-Mar-07	31,149	4,860	454	26,743	26,565	15.2	3,527	14.4	3,349	178
11-Mar-07	31,149	4,840	454	26,763	26,412	15.9	3,674	14.4	3,323	351
18-Mar-07	31,149	5,738	454	25,865	25,314	17.3	3,817	14.8	3,266	551
25-Mar-07	31,149	5,738	454	25,865	24,882	19.1	4,151	14.6	3,168	983

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 supersede information presented in this report.

(Table A2 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Price-responsive Demand MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
01-Apr-07	31,149	5,738	454	25,865	24,356	23.0	4,840	15.8	3,331	1,509
08-Apr-07	31,281	6,036	423	25,668	24,451	21.7	4,578	15.9	3,361	1,217
15-Apr-07	31,281	6,057	423	25,647	24,082	24.3	5,015	16.7	3,450	1,565
22-Apr-07	31,281	6,532	423	25,172	23,697	23.0	4,711	15.8	3,236	1,475
29-Apr-07	31,281	6,976	423	24,728	23,184	22.7	4,569	15.0	3,025	1,544
06-May-07	31,281	6,593	423	25,111	23,122	25.6	5,114	15.6	3,125	1,989
13-May-07	31,281	6,573	423	25,131	22,945	26.5	5,268	15.5	3,082	2,186
20-May-07	31,281	8,028	423	23,676	24,599	10.3	2,211	14.6	3,134	-923
27-May-07	31,281	6,068	423	25,636	25,040	19.1	4,103	16.3	3,507	596
03-Jun-07	31,281	6,330	423	25,374	25,420	15.3	3,374	15.6	3,420	-46
10-Jun-07	31,281	5,842	423	25,862	25,731	15.6	3,485	15.0	3,354	131
17-Jun-07	31,281	5,347	423	26,357	27,325	10.9	2,587	15.0	3,555	-968
24-Jun-07	31,766	5,347	423	26,842	28,833	8.1	2,005	16.1	3,996	-1,991
01-Jul-07	31,766	4,316	423	27,873	28,075	14.0	3,416	14.8	3,618	-202
08-Jul-07	31,966	3,947	423	28,442	28,228	15.8	3,877	14.9	3,663	214
15-Jul-07	31,966	3,947	423	28,442	29,898	10.5	2,701	16.2	4,157	-1,456
22-Jul-07	31,966	3,736	423	28,653	29,078	13.8	3,481	15.5	3,906	-425
29-Jul-07	31,966	3,736	423	28,653	28,753	15.0	3,739	15.4	3,839	-100
05-Aug-07	31,840	4,033	423	28,230	28,597	14.0	3,459	15.5	3,826	-367
12-Aug-07	31,840	4,033	423	28,230	29,052	12.3	3,084	15.5	3,906	-822
19-Aug-07	31,840	3,289	423	28,974	28,408	17.4	4,292	15.1	3,726	566
26-Aug-07	31,840	3,289	423	28,974	27,610	20.8	4,991	15.1	3,627	1,364
02-Sep-07	31,840	3,824	423	28,439	27,775	17.5	4,227	14.7	3,563	664
09-Sep-07	31,840	5,170	423	27,093	27,716	13.3	3,176	15.9	3,799	-623
16-Sep-07	31,840	6,391	423	25,872	26,435	12.8	2,933	15.2	3,496	-563
23-Sep-07	31,840	6,907	423	25,356	25,314	16.4	3,571	16.2	3,529	42
30-Sep-07	31,840	7,310	423	24,953	23,947	21.7	4,455	16.8	3,449	1,006
07-Oct-07	31,916	6,591	423	25,748	23,464	26.5	5,397	15.3	3,113	2,284
14-Oct-07	31,916	6,245	423	26,094	23,639	27.4	5,604	15.4	3,149	2,455
21-Oct-07	31,916	6,245	423	26,094	24,132	24.5	5,134	15.1	3,172	1,962
28-Oct-07	31,916	5,729	423	26,610	24,624	25.0	5,315	15.6	3,329	1,986
04-Nov-07	31,916	5,668	423	26,671	25,050	22.4	4,872	14.9	3,251	1,621
11-Nov-07	31,916	5,098	423	27,241	25,466	22.6	5,023	14.6	3,248	1,775
18-Nov-07	31,916	5,098	423	27,241	26,051	18.9	4,327	13.7	3,137	1,190
25-Nov-07	31,916	4,623	423	27,716	26,703	18.6	4,338	14.2	3,325	1,013
02-Dec-07	31,916	5,108	423	27,231	26,503	16.4	3,833	13.3	3,105	728
09-Dec-07	32,066	4,484	423	28,005	27,418	16.1	3,891	13.7	3,304	587
16-Dec-07	32,066	3,453	423	29,036	27,598	20.0	4,845	14.1	3,407	1,438
23-Dec-07	32,066	2,577	423	29,912	27,946	22.1	5,423	14.1	3,457	1,966
30-Dec-07	32,066	2,655	423	29,834	26,484	29.6	6,819	15.1	3,469	3,350

**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
02-Jul-06	23,934	26,156	01-Apr-07	21,025	22,205
09-Jul-06	24,390	25,825	08-Apr-07	21,090	22,574
16-Jul-06	25,397	27,278	15-Apr-07	20,632	21,791
23-Jul-06	24,829	26,479	22-Apr-07	20,461	23,588
30-Jul-06	24,571	26,392	29-Apr-07	20,159	23,573
06-Aug-06	24,430	26,556	06-May-07	19,997	23,240
13-Aug-06	24,805	26,658	13-May-07	19,863	23,895
20-Aug-06	24,340	26,593	20-May-07	21,465	23,504
27-Aug-06	23,648	26,000	27-May-07	21,533	24,191
03-Sep-06	23,863	26,113	03-Jun-07	22,000	24,970
10-Sep-06	23,567	26,020	10-Jun-07	22,377	24,794
17-Sep-06	22,591	25,441	17-Jun-07	23,770	25,514
24-Sep-06	21,439	24,975	24-Jun-07	24,837	26,959
01-Oct-06	20,211	23,658	01-Jul-07	24,457	26,685
08-Oct-06	20,116	23,959	08-Jul-07	24,565	26,001
15-Oct-06	20,284	20,953	15-Jul-07	25,741	27,622
22-Oct-06	20,758	21,597	22-Jul-07	25,172	26,822
29-Oct-06	21,089	21,848	29-Jul-07	24,914	26,735
05-Nov-06	21,734	22,418	05-Aug-07	24,771	26,897
12-Nov-06	21,988	22,743	12-Aug-07	25,146	26,999
19-Nov-06	22,699	23,313	19-Aug-07	24,682	26,934
26-Nov-06	23,163	24,065	26-Aug-07	23,983	26,335
03-Dec-06	23,156	23,973	02-Sep-07	24,212	26,463
10-Dec-06	23,872	24,958	09-Sep-07	23,917	26,370
17-Dec-06	23,949	24,986	16-Sep-07	22,939	25,789
24-Dec-06	24,220	25,175	23-Sep-07	21,785	25,323
31-Dec-06	22,555	23,778	30-Sep-07	20,498	24,004
07-Jan-07	24,016	24,938	07-Oct-07	20,351	24,264
14-Jan-07	24,350	25,329	14-Oct-07	20,490	21,159
21-Jan-07	24,768	25,826	21-Oct-07	20,960	21,807
28-Jan-07	24,512	25,678	28-Oct-07	21,295	22,054
04-Feb-07	24,392	25,344	04-Nov-07	21,799	22,430
11-Feb-07	24,243	25,359	11-Nov-07	22,218	22,985
18-Feb-07	23,905	24,949	18-Nov-07	22,914	23,528
25-Feb-07	23,486	24,681	25-Nov-07	23,378	24,280
04-Mar-07	23,216	24,463	02-Dec-07	23,398	24,215
11-Mar-07	23,089	24,179	09-Dec-07	24,114	25,200
18-Mar-07	22,048	22,893	16-Dec-07	24,191	25,228
25-Mar-07	21,714	22,460	23-Dec-07	24,489	25,444
			30-Dec-07	23,015	24,091

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

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Price-responsive Demand MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
02-Jul-06	30,992	3,280	333	28,045	29,862	7.2	1,889	14.2	3,706	-1,817
09-Jul-06	30,992	3,210	333	28,115	29,455	8.9	2,290	14.1	3,630	-1,340
16-Jul-06	30,992	3,015	333	28,310	31,191	3.8	1,032	14.3	3,913	-2,881
23-Jul-06	30,992	2,994	333	28,331	30,232	7.0	1,852	14.2	3,753	-1,901
30-Jul-06	30,992	2,984	333	28,341	30,131	7.4	1,949	14.2	3,739	-1,790
06-Aug-06	30,992	3,236	333	28,089	30,359	5.8	1,533	14.3	3,803	-2,270
13-Aug-06	30,992	3,248	333	28,077	30,473	5.3	1,419	14.3	3,815	-2,396
20-Aug-06	30,992	2,998	333	28,327	30,412	6.5	1,734	14.4	3,819	-2,085
27-Aug-06	30,992	3,503	333	27,822	29,692	7.0	1,822	14.2	3,692	-1,870
03-Sep-06	30,992	4,785	333	26,540	29,848	1.6	427	14.3	3,735	-3,308
10-Sep-06	30,992	4,770	333	26,555	29,681	2.1	535	14.1	3,661	-3,126
17-Sep-06	30,992	6,735	333	24,590	29,110	-3.3	-851	14.4	3,669	-4,520
24-Sep-06	30,992	6,388	333	24,937	28,592	-0.2	-38	14.5	3,617	-3,655
01-Oct-06	30,992	6,645	333	24,680	27,132	4.3	1,022	14.7	3,474	-2,452
08-Oct-06	30,992	5,293	333	26,032	27,457	8.7	2,073	14.6	3,498	-1,425
15-Oct-06	30,992	6,799	333	24,526	23,843	17.1	3,573	13.8	2,890	683
22-Oct-06	30,992	6,441	333	24,884	24,616	15.2	3,287	14.0	3,019	268
29-Oct-06	30,992	7,202	333	24,123	25,075	10.4	2,275	14.8	3,227	-952
05-Nov-06	30,997	7,644	333	23,686	25,681	5.7	1,268	14.6	3,263	-1,995
12-Nov-06	30,997	7,074	333	24,256	25,963	6.7	1,513	14.2	3,220	-1,707
19-Nov-06	30,997	5,799	333	25,531	26,655	9.5	2,218	14.3	3,342	-1,124
26-Nov-06	30,997	5,125	333	26,205	27,493	8.9	2,140	14.2	3,428	-1,288
03-Dec-06	30,997	5,084	333	26,246	27,211	9.5	2,273	13.5	3,238	-965
10-Dec-06	30,997	4,964	333	26,366	28,406	5.6	1,408	13.8	3,448	-2,040
17-Dec-06	30,997	3,551	333	27,779	28,358	11.2	2,793	13.5	3,372	-579
24-Dec-06	30,997	2,056	333	29,274	28,592	16.3	4,099	13.6	3,417	682
31-Dec-06	30,997	2,056	333	29,274	27,117	23.1	5,496	14.0	3,339	2,157
07-Jan-07	30,997	1,974	333	29,356	28,205	17.7	4,418	13.1	3,267	1,151
14-Jan-07	30,997	1,974	333	29,356	28,672	15.9	4,027	13.2	3,343	684
21-Jan-07	30,997	1,974	333	29,356	29,271	13.7	3,530	13.3	3,445	85
28-Jan-07	30,997	2,801	333	28,529	29,196	11.1	2,851	13.7	3,518	-667
04-Feb-07	30,997	2,855	333	28,475	28,801	12.4	3,131	13.6	3,457	-326
11-Feb-07	30,997	2,841	333	28,489	28,810	12.3	3,130	13.6	3,451	-321
18-Feb-07	30,997	2,841	333	28,489	28,330	14.2	3,540	13.6	3,381	159
25-Feb-07	30,844	2,846	333	28,331	28,028	14.8	3,650	13.6	3,347	303
04-Mar-07	30,844	4,565	333	26,612	27,955	8.8	2,149	14.3	3,492	-1,343
11-Mar-07	30,844	4,565	333	26,612	27,635	10.1	2,433	14.3	3,456	-1,023
18-Mar-07	30,844	5,463	333	25,714	26,197	12.3	2,821	14.4	3,304	-483
25-Mar-07	30,844	5,463	333	25,714	25,678	14.5	3,254	14.3	3,218	36

(Table A4 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Price-responsive Demand MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
01-Apr-07	30,844	5,463	333	25,714	25,348	15.8	3,509	14.2	3,143	366
08-Apr-07	30,844	5,642	307	25,509	25,842	13.0	2,935	14.5	3,268	-333
15-Apr-07	30,844	5,663	307	25,488	24,993	17.0	3,697	14.7	3,202	495
22-Apr-07	30,844	6,138	307	25,013	27,074	6.0	1,425	14.8	3,486	-2,061
29-Apr-07	30,844	6,582	307	24,569	27,051	4.2	996	14.8	3,478	-2,482
06-May-07	30,844	6,199	307	24,952	26,492	7.4	1,712	14.0	3,252	-1,540
13-May-07	30,844	6,179	307	24,972	27,286	4.5	1,077	14.2	3,391	-2,314
20-May-07	30,844	7,634	307	23,517	26,610	0.1	13	13.2	3,106	-3,093
27-May-07	30,844	5,674	307	25,477	27,656	5.3	1,286	14.3	3,465	-2,179
03-Jun-07	30,844	5,936	307	25,215	28,381	1.0	245	13.7	3,411	-3,166
10-Jun-07	30,844	5,448	307	25,703	28,170	3.7	909	13.6	3,376	-2,467
17-Jun-07	30,844	4,953	307	26,198	29,059	2.7	684	13.9	3,545	-2,861
24-Jun-07	30,844	4,953	307	26,198	30,757	-2.8	-761	14.1	3,798	-4,559
01-Jul-07	30,844	3,922	307	27,229	30,383	2.0	544	13.9	3,698	-3,154
08-Jul-07	30,994	3,508	307	27,793	29,652	6.9	1,792	14.0	3,651	-1,859
15-Jul-07	30,994	3,508	307	27,793	31,609	0.6	171	14.4	3,987	-3,816
22-Jul-07	30,994	3,297	307	28,004	30,617	4.4	1,182	14.2	3,795	-2,613
29-Jul-07	30,994	3,297	307	28,004	30,501	4.8	1,269	14.1	3,766	-2,497
05-Aug-07	30,868	3,594	307	27,581	30,764	2.5	684	14.4	3,867	-3,183
12-Aug-07	30,868	3,594	307	27,581	30,888	2.2	582	14.4	3,889	-3,307
19-Aug-07	30,868	2,850	307	28,325	30,720	5.2	1,391	14.1	3,786	-2,395
26-Aug-07	30,868	2,850	307	28,325	30,010	7.6	1,990	14.0	3,675	-1,685
02-Sep-07	30,868	3,385	307	27,790	30,150	5.0	1,327	13.9	3,687	-2,360
09-Sep-07	30,868	4,731	307	26,444	30,055	0.3	74	14.0	3,685	-3,611
16-Sep-07	30,868	5,952	307	25,223	29,399	-2.2	-566	14.0	3,610	-4,176
23-Sep-07	30,868	6,468	307	24,707	28,896	-2.4	-616	14.1	3,573	-4,189
30-Sep-07	30,868	6,871	307	24,304	27,337	1.3	300	13.9	3,333	-3,033
07-Oct-07	30,868	6,083	307	25,092	27,693	3.4	828	14.1	3,429	-2,601
14-Oct-07	30,868	5,737	307	25,438	24,149	20.2	4,279	14.1	2,990	1,289
21-Oct-07	30,868	5,737	307	25,438	24,831	16.7	3,631	13.9	3,024	607
28-Oct-07	30,868	5,221	307	25,954	25,121	17.7	3,900	13.9	3,067	833
04-Nov-07	30,868	5,160	307	26,015	25,505	16.0	3,585	13.7	3,075	510
11-Nov-07	30,868	4,590	307	26,585	26,078	15.7	3,600	13.5	3,093	507
18-Nov-07	30,868	4,590	307	26,585	26,728	13.0	3,057	13.6	3,200	-143
25-Nov-07	30,868	4,115	307	27,060	27,685	11.5	2,780	14.0	3,405	-625
02-Dec-07	30,868	4,600	307	26,575	27,435	9.8	2,360	13.3	3,220	-860
09-Dec-07	31,018	3,936	307	27,389	28,605	8.7	2,189	13.5	3,405	-1,216
16-Dec-07	31,018	2,916	307	28,409	28,672	12.6	3,181	13.7	3,444	-263
23-Dec-07	31,018	2,038	307	29,287	28,851	15.1	3,843	13.4	3,407	436
30-Dec-07	31,018	2,038	307	29,287	27,355	21.6	5,196	13.6	3,264	1,932

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

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Price-responsive Demand MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
02-Jul-06	30,992	3,280	338	28,050	29,862	7.2	1,894	14.2	3,706	-1,812
09-Jul-06	30,992	3,210	338	28,120	29,455	8.9	2,295	14.1	3,630	-1,335
16-Jul-06	30,992	3,015	338	28,315	31,191	3.8	1,037	14.3	3,913	-2,876
23-Jul-06	30,992	2,994	338	28,336	30,232	7.0	1,857	14.2	3,753	-1,896
30-Jul-06	30,992	2,984	338	28,346	30,131	7.4	1,954	14.2	3,739	-1,785
06-Aug-06	30,994	3,238	378	28,133	30,359	5.9	1,577	14.3	3,803	-2,226
13-Aug-06	30,994	3,250	378	28,121	30,473	5.5	1,463	14.3	3,815	-2,352
20-Aug-06	30,994	3,000	378	28,371	30,412	6.7	1,778	14.4	3,819	-2,041
27-Aug-06	30,994	3,505	378	27,866	29,692	7.2	1,866	14.2	3,692	-1,826
03-Sep-06	30,994	4,787	378	26,584	29,848	1.8	471	14.3	3,735	-3,264
10-Sep-06	30,994	4,772	378	26,599	29,681	2.2	579	14.1	3,661	-3,082
17-Sep-06	30,994	6,737	378	24,634	29,110	-3.2	-807	14.4	3,669	-4,476
24-Sep-06	30,994	6,390	378	24,981	28,592	0.0	6	14.5	3,617	-3,611
01-Oct-06	30,994	6,647	378	24,724	27,132	4.5	1,066	14.7	3,474	-2,408
08-Oct-06	31,093	5,384	378	26,086	27,455	8.9	2,127	14.6	3,496	-1,369
15-Oct-06	31,093	6,890	378	24,580	23,842	17.3	3,627	13.8	2,889	738
22-Oct-06	31,093	6,532	378	24,938	24,615	15.5	3,341	14.0	3,018	323
29-Oct-06	31,093	7,293	378	24,177	25,072	10.7	2,329	14.8	3,224	-895
05-Nov-06	31,098	7,734	378	23,741	25,679	5.9	1,323	14.6	3,261	-1,938
12-Nov-06	31,098	7,164	378	24,311	25,960	6.9	1,568	14.2	3,217	-1,649
19-Nov-06	31,098	5,889	378	25,586	26,654	9.8	2,273	14.3	3,341	-1,068
26-Nov-06	31,098	5,215	378	26,260	27,492	9.1	2,195	14.2	3,427	-1,232
03-Dec-06	31,098	5,174	392	26,315	27,209	9.8	2,342	13.5	3,236	-894
10-Dec-06	31,098	5,054	392	26,435	28,404	5.9	1,477	13.8	3,446	-1,969
17-Dec-06	31,098	3,641	392	27,848	28,355	11.5	2,862	13.5	3,369	-507
24-Dec-06	31,098	2,146	392	29,343	28,590	16.6	4,168	13.6	3,415	753
31-Dec-06	31,098	2,146	392	29,343	27,117	23.4	5,565	14.0	3,339	2,226
07-Jan-07	31,098	2,071	454	29,480	28,203	18.2	4,542	13.1	3,265	1,277
14-Jan-07	31,098	2,064	454	29,487	28,670	16.4	4,158	13.2	3,341	817
21-Jan-07	31,098	2,064	454	29,487	29,270	14.2	3,661	13.3	3,444	217
28-Jan-07	31,098	2,891	454	28,660	29,193	11.6	2,982	13.7	3,515	-533
04-Feb-07	31,098	2,945	454	28,606	28,800	12.9	3,262	13.6	3,456	-194
11-Feb-07	31,103	2,937	454	28,619	28,808	12.9	3,260	13.6	3,449	-189
18-Feb-07	31,103	2,937	454	28,619	28,329	14.7	3,670	13.6	3,380	290
25-Feb-07	30,950	2,942	454	28,461	28,026	15.3	3,780	13.6	3,345	435
04-Mar-07	31,149	4,860	454	26,743	27,954	9.3	2,280	14.3	3,491	-1,211
11-Mar-07	31,149	4,840	454	26,763	27,632	10.7	2,584	14.3	3,453	-869
18-Mar-07	31,149	5,738	454	25,865	26,193	13.0	2,972	14.4	3,300	-328
25-Mar-07	31,149	5,738	454	25,865	25,671	15.2	3,405	14.3	3,211	194

(Table A5 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Price-responsive Demand MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
01-Apr-07	31,149	5,738	454	25,865	25,341	16.5	3,660	14.1	3,136	524
08-Apr-07	31,281	6,036	423	25,668	25,835	13.7	3,094	14.5	3,261	-167
15-Apr-07	31,281	6,057	423	25,647	24,986	17.7	3,856	14.7	3,195	661
22-Apr-07	31,281	6,532	423	25,172	27,063	6.7	1,584	14.7	3,475	-1,891
29-Apr-07	31,281	6,976	423	24,728	27,046	4.9	1,155	14.7	3,473	-2,318
06-May-07	31,281	6,593	423	25,111	26,485	8.1	1,871	14.0	3,245	-1,374
13-May-07	31,281	6,573	423	25,131	27,279	5.2	1,236	14.2	3,384	-2,148
20-May-07	31,281	8,028	423	23,676	26,606	0.7	172	13.2	3,102	-2,930
27-May-07	31,281	6,068	423	25,636	27,652	6.0	1,445	14.3	3,461	-2,016
03-Jun-07	31,281	6,330	423	25,374	28,372	1.6	404	13.6	3,402	-2,998
10-Jun-07	31,281	5,842	423	25,862	28,164	4.3	1,068	13.6	3,370	-2,302
17-Jun-07	31,281	5,347	423	26,357	29,052	3.3	843	13.9	3,538	-2,695
24-Jun-07	31,766	5,347	423	26,842	30,742	-0.4	-117	14.0	3,783	-3,900
01-Jul-07	31,766	4,316	423	27,873	30,399	4.5	1,188	13.9	3,714	-2,526
08-Jul-07	31,966	3,947	423	28,442	29,644	9.4	2,441	14.0	3,643	-1,202
15-Jul-07	31,966	3,947	423	28,442	31,580	3.0	820	14.3	3,958	-3,138
22-Jul-07	31,966	3,736	423	28,653	30,602	6.8	1,831	14.1	3,780	-1,949
29-Jul-07	31,966	3,736	423	28,653	30,500	7.2	1,918	14.1	3,765	-1,847
05-Aug-07	31,840	4,033	423	28,230	30,750	5.0	1,333	14.3	3,853	-2,520
12-Aug-07	31,840	4,033	423	28,230	30,880	4.6	1,231	14.4	3,881	-2,650
19-Aug-07	31,840	3,289	423	28,974	30,723	7.6	2,040	14.1	3,789	-1,749
26-Aug-07	31,840	3,289	423	28,974	30,004	10.0	2,639	13.9	3,669	-1,030
02-Sep-07	31,840	3,824	423	28,439	30,165	7.5	1,976	14.0	3,702	-1,726
09-Sep-07	31,840	5,170	423	27,093	30,053	2.7	723	14.0	3,683	-2,960
16-Sep-07	31,840	6,391	423	25,872	29,405	0.3	83	14.0	3,616	-3,533
23-Sep-07	31,840	6,907	423	25,356	28,894	0.1	33	14.1	3,571	-3,538
30-Sep-07	31,840	7,310	423	24,953	27,310	4.0	949	13.8	3,306	-2,357
07-Oct-07	31,916	6,591	423	25,748	27,687	6.1	1,484	14.1	3,423	-1,939
14-Oct-07	31,916	6,245	423	26,094	24,217	23.3	4,935	14.5	3,058	1,877
21-Oct-07	31,916	6,245	423	26,094	24,865	19.7	4,287	14.0	3,058	1,229
28-Oct-07	31,916	5,729	423	26,610	25,183	20.7	4,556	14.2	3,129	1,427
04-Nov-07	31,916	5,668	423	26,671	25,517	18.9	4,241	13.8	3,087	1,154
11-Nov-07	31,916	5,098	423	27,241	26,079	18.5	4,256	13.5	3,094	1,162
18-Nov-07	31,916	5,098	423	27,241	26,722	15.8	3,713	13.6	3,194	519
25-Nov-07	31,916	4,623	423	27,716	27,677	14.2	3,436	14.0	3,397	39
02-Dec-07	31,916	5,108	423	27,231	27,420	12.5	3,016	13.2	3,205	-189
09-Dec-07	32,066	4,443	423	28,046	28,601	11.3	2,846	13.5	3,401	-555
16-Dec-07	32,066	3,423	423	29,066	28,667	15.2	3,838	13.6	3,439	399
23-Dec-07	32,066	2,545	423	29,944	28,828	17.7	4,500	13.3	3,384	1,116
30-Dec-07	32,066	2,545	423	29,944	27,436	24.3	5,853	13.9	3,345	2,508

Table A6 Energy Production Capability Forecast

Month	Existing Resource Scenario Forecast Energy Production Capability (GWh)	Planned Resource Scenario Forecast Energy Production Capability (GWh)
Jul 2006	17,185	17,221
Aug 2006	16,644	16,682
Sep 2006	14,912	14,950
Oct 2006	15,121	15,183
Nov 2006	14,757	14,817
Dec 2006	16,502	16,565
Jan 2007	17,087	17,142
Feb 2007	15,672	15,725
Mar 2007	15,795	15,899
Apr 2007	15,096	15,225
May 2007	15,276	15,411
Jun 2007	15,821	15,952
Jul 2007	16,502	16,649
Aug 2007	16,717	16,865
Sep 2007	14,773	14,917
Oct 2007	15,430	15,597
Nov 2007	15,552	15,714
Dec 2007	15,786	15,954

- 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-Q2
Essa	N/A	Hydro One Networks Inc.	Orangeville TS Shunt Capacitor	2007-Q2
Essa	2006-227	Hydro One Networks Inc.	Everett TS new transformer station	2007-Q2
Niagara	2002-085	Hydro One Networks Inc.	Queenston Flow West	To be determined
Niagara	2005-192	Canadian Niagara Power	115 kV Interconnection at Fort Erie	2007-Q4
Northeast	2004-EX211	Great Lakes Power Ltd.	Patrick St. TS - 8 oil circuit breakers replaced with SF6 breakers	2006-Q3
Northeast	2003-EX173	Great Lakes Power Ltd.	New Gartshore TS - 5x115 kV breaker ring-bus to replace existing Gartshore TS	2006-Q4
Northeast	2004-EX208	Great Lakes Power Ltd.	115 kV Thirdline Tie Breaker Installation - Between Breakers 445 and 455	2006-Q4
Northeast	2002-EX070	Great Lakes Power Ltd.	P21G 230 kV cct Upgraded to 374 MVA continuous rating	2006-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
Northwest	2005-195	Hydro One Networks Inc.	Fort Frances TS reactive compensation	2007-Q3
Southwest	N/A	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
Toronto	2002-057	Hydro One Networks Inc.	John x Esplanade 115 kV cable	2007-Q4
West	N/A	Hydro One Networks Inc.	L25/27N inline breakers	2006-Q4
West	2006-212	Hydro One Networks Inc.	London Talbot TS new transformer station	2007-Q2

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# 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**

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Jul 06 2006 10:00 PM	Jul 31 2006 9:59 PM	Cardinal Power CGS: T2, G2B, T1H,	CWW	10 Hour		none
Oct 16 2006 6:00 AM	Oct 26 2006 4:00 PM	Bilberry Creek TS: A1-A2, T2-A, H9A::BILBERRY_CREEK_TS::BILBERRY_CREEK_JCT, 42H9A-77	CNW	4 Hour		none
Jul 03 2006 6:00 AM	Aug 04 2006 4:00 PM	Haley JCT: 69X2Y-23, 23X2Y-MSS1	CNW	4 Hour		none
Jul 10 2006 6:00 AM	Aug 10 2006 4:00 PM	Haley JCT: X2Y::HALEY_JCT::COBDEN_TS,	CNW	4 Hour		none
Jul 07 2006 7:00 AM	Jul 28 2006 6:00 PM	Havelock TS: C25H::HAVELOCK_TS::CHATS_FALLS_SS, AH, L25L26, C25H::HAVELOCK_TS::CHATS_FALLS_SS, AL28, A_BUS	CWW	12 Hour	FIO, Chats Falls Area Generation, P33C Chats Falls Inflow	FIO reduced by 30MW, Chats Falls Area Generation reduced from < 650MW to < 435MW, P33C Chats Falls Inflow
Sep 05 2006 7:00 AM	Sep 11 2006 6:00 PM	Chats Falls SS: L28L33, T2B, T2J, KL28, C28C::CHERRYWOOD_TS::MARINE_JCT, CT, C28C::CHERRYWOOD_TS::MARINE_JCT, T2	CWW	12 Hour	FIO, Chats Falls Area Generation, P33C Chats Falls Inflow	FIO reduced by 30MW, Chats Falls Area Generation reduced from < 650MW to < 435MW, P33C Chats Falls Inflow
Oct 10 2006 7:00 AM	Oct 27 2006 6:00 PM	Chats Falls TSD_BUS, C27P::CHATS_FALLS_TS::GALETTA_JCT, HL27, C27P::DOBBIN_TS::GALETTA_JCT, C27P::DOBBIN_TS::GALETTA_JCT, DL3, AL27, DL33, C27P::CHATS_FALLS_TS::GALETTA_JCT	CWW	12 Hour	FIO, X1P Flow into Dobbin, Flow into Dobbin, Chats Falls Inflow Limit, Chats Falls Area Generation	FIO reduced by 30MW, X1P Flow into Dobbin reduced from N.L. to < 125 MW, Flow into Dobbin reduced from < 350MW to < 90MW, Chats Falls Area Generation reduced from
Oct 10 2006 5:00 AM	Oct 27 2006 6:00 PM	Cherrywood TS: T17L28, T2B, C28C::CHERRYWOOD_TS::MARINE_JCT, AL28, T2J, C28C::CHERRYWOOD_TS::MARINE_JCT, KL28,	CWW	12 Hour	FIO, Chats Falls Area Generation, P33C Chats Falls Inflow	FIO reduced by 30MW, Chats Falls Area Generation reduced from < 650MW to < 435MW, P33C Chats Falls Inflow

**Table C3 Essa Zone**

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Nov 06 2006 5:00 AM	Nov 24 2006 6:00 PM	Otto Holden TS: D5H::DES_JOACHIMS_TS::OTTO_HOLDEN_TS, 6-D5H, 5-D5H,	CNW	2 Hour		
Jun 27 2006 5:00 AM	Jul 05 2006 6:00 PM	Parry Sound TS: BY, 77T2-E26, T2Y, Y_BUS, SS2-X, T2, BY, T2Y	CWW	8 Hour		

**Table C4 Niagara Zone**

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Sep 06 2006 6:00 AM	Sep 14 2006 6:00 PM	Murray TS: T11Y1, T11B1, T11, T11-L	DNW	4 Hour		
Sep 18 2006 6:00 AM	Sep 28 2006 6:00 PM	Murray TS: T12-L, T12Y2, T12, T12B2	CWW	8 Hour		
Oct 15 2006 6:00 AM	Nov 04 2006 6:00 PM	Carlton TS: T3-A, T3K, T3, T3Y	CWW	Non-Recallable		
Oct 18 2006 6:00 AM	Oct 23 2006 6:00 PM	Carlton TS: T4-A, A2-A3, T3-A, 40-D10S,	CWW	4 Hour		
Mar 13 2006 12:00 PM	Dec 31 2006 11:59 PM	Oxy Vinyls CTS: EL6	CWW	Non-Recallable		
Mar 10 2006 10:30 AM	Dec 31 2006 11:59 PM	Cytec Welland CTS: 93-A7C	CWW	Non-Recallable		
Jun 19 2006 3:00 PM	Jul 09 2006 7:00 AM	Cherry JCT: 4500Q2AH-MSO, 69-Q2AH	CWW	4 Hour		
Jun 19 2006 5:00 AM	Jul 09 2006 6:00 PM	Beck #1 SS: Q5G::BECK #1_SS::HOLLAND_ROAD,	CWW	4 Hour		
Jul 24 2006 7:00 AM	Aug 05 2006 3:00 PM	Beck #2 TS: TL26L27, KL26, KL26, 28-	CWW	4 Hour		
Nov 20 2006 8:00 AM	Dec 01 2006 4:00 PM	Beck #1 SS: Q2AH::BECK #1_Q2AH_JCT::BECK #1	CWW	4 Hour		

Table C5 Northeast Zone

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Aug 22 2006 7:00 AM	Sep 29 2006 6:00 PM	Porcupine TS: H1L502	CWW	8 Hour		
Jul 04 2006 7:00 AM	Aug 11 2006 6:00 PM	Porcupine TS: L01L02	CWW	8 Hour		
Jul 11 2006 9:00 AM	Jul 22 2006 3:00 PM	Porcupine TS: K2K3	CWW	8 Hour		
Oct 10 2006 7:00 AM	Nov 10 2006 6:00 PM	Porcupine TS: H2L501	CWW	8 Hour		
Jun 26 2006 7:00 AM	Jul 07 2006 5:00 PM	Mississagi TS: 34-P21G, AL23, 34-T27P,	CWW	8 Hour		
Jun 26 2006 7:00 AM	Jul 07 2006 5:00 PM	Mississagi TS: P21G::MISSISSAGI_TS::P21G_P8_JCT, 34-P21G,	CWW	4 Day		
Dec 24 2006 5:30 PM	Jan 01 2007 5:00 PM	Mississagi TS: 34-P21G, P21G::MISSISSAGI_TS::P21G_P8_JCT, P21G::MISSISSAGI_TS::P21G_P8_JCT	CWW	Non-Recallable		
Nov 22 2005 12:00 AM	Jun 14 2030 11:59 PM	Mackay TS: ANJIGAMI LINE #1,	CWW	Non-Recallable		
Sep 08 2006 11:01 PM	Sep 17 2006 6:01 PM	Scott GS: 902	CWW	7 Day		
Jun 12 2006 12:00 PM	Jul 13 2006 6:00 PM	Wawa TS: T2R2, T2SC2, T2-H, T2-K,	CWW	4 Day		
Jun 19 2006 6:00 AM	Jul 14 2006 6:00 PM	Widdfield SS: 38H24S-6, 6-H24S	CNW	4 Hour		
Aug 11 2006 6:00 AM	Aug 17 2006 6:00 PM	Abitibi Canyon SS: 12-C6R, 32C6R-12	CWW	4 Hour		
Nov 06 2006 6:00 AM	Nov 16 2006 6:00 PM	Cassels JCT: 35D2L-32, 32-D2L	CWW	4 Hour		
Dec 07 2006 6:00 AM	Dec 21 2006 6:00 PM	Algoma TS: S22A::CLARABELLE_JCT::ALGOMA_T S, S22A::CLARABELLE_JCT::CLARABELL E_TS, T2-S22A, S22A::CLARABELLE_JCT::ALGOMA_T S	CNW	4 Hour		
Dec 23 2005 7:00 AM	Dec 31 2006 11:59 PM	Third Line TS: 488, 492	CWW	Non-Recallable		
Nov 06 2006 8:01 AM	Nov 24 2006 2:01 PM	Wells GS: T27	CWW	48 Hour		
Jun 19 2006 8:30 AM	Jun 29 2006 2:01 PM	Wells GS: T28	CWW	72 Hour		
Oct 02 2006 8:30 AM	Oct 08 2006 2:01 PM	Red Rock GS: T2	CWW	48 Hour		
Oct 19 2005 12:00 PM	Dec 31 2006 11:59 PM	Third Line TS: 415	CWW	Non-Recallable		
Jul 04 2006 7:00 AM	Feb 23 2007 6:00 PM	Hanmer TS: R6, R6N	CWW	Non-Recallable		
Apr 20 2006 4:01 PM	Jul 06 2006 9:01 AM	Patrick St, TS: 248, 228, 235	CWW	5 Day		
Jul 04 2006 7:00 AM	Aug 10 2006 6:00 PM	Pinard TS: T1, T1-D501P, 31T1-K, T1-R	CNW	30 Minute		
Aug 14 2006 5:00 AM	Sep 22 2006 6:00 PM	Pinard TS: T2, T2-D501P, 31T2-K, 31R2	CWW	30 Minute		
Apr 26 2006 6:30 AM	Dec 31 2006 11:59 PM	Mackay TS: 632, 482, SAULT2::MACKAY_TS::THIRD_LINE_T S,	CWW	Non-Recallable		
Aug 24 2006 7:00 AM	Aug 24 2007 12:00 PM	Algoma TS: X27A::HANMER_TS::ALGOMA_TS, 26- X27A, T6-A, T6-A, AL1, X27A::HANMER_TS::ALGOMA_TS, 33-	CWW	1 Hour		
May 07 2006 6:30 AM	Dec 31 2006 11:59 PM	Mackay TS: SAULT2::MACKAY_TS::THIRD_LINE_T S, 482,	CWW	Non-Recallable		

Table C6 Northwest Zone

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Apr 30 2005 12:01 AM	Dec 31 2072 11:59 PM	Thunder Bay TGS: C1	CWW	Non-Recallable		
Oct 10 2006 8:30 AM	Nov 16 2006 6:00 PM	Vermilion JCT: K23D::DRYDEN_TS::VERMILION_JCT, K23D::DRYDEN_TS::VERMILION_JCT, 3411-25, 25-K23D	CWW	4 Hour		
Aug 02 2006 6:30 AM	Aug 08 2006 5:30 PM	Mackenzie TS: 20-D26A, D26A::DRYDEN_TS::MACKENZIE_TS, 25-D26A, D26A::DRYDEN_TS::MACKENZIE_TS	CWW	4 Hour		
Sep 13 2006 6:30 AM	Sep 19 2006 5:30 PM	Fort Frances TS: F25A::FORT_FRANCES_TS::MACKENZ IE_TS, F25A::FORT_FRANCES_TS::MACKENZ IE_TS, 22-F25A, 20-F25A	CWW	4 Hour		
Sep 27 2006 6:30 AM	Oct 03 2006 5:30 PM	Fort Frances TS: 22-F25A, 20-F25A, F25A::FORT_FRANCES_TS::MACKENZ IE_TS, F25A::FORT_FRANCES_TS::MACKENZ IE_TS	CWW	4 Hour		
Aug 30 2006 6:30 AM	Sep 06 2006 5:30 PM	Fort Frances TS: F25A::FORT_FRANCES_TS::MACKENZ IE_TS, 20-F25A, F25A::FORT_FRANCES_TS::MACKENZ IE_TS, 22-F25A	CWW	4 Hour		
Nov 29 2006 6:30 AM	Dec 19 2006 5:30 PM	Kenora TS: 34-K21W, K21W::WHITESHELL- MAN_CTS::KENORA_TS, K21W::WHITESHELL- MAN_CTS::KENORA_TS	CWW	4 Hour		
Aug 14 2006 8:00 AM	Aug 25 2006 5:00 PM	Alexander SS: 4-C1A, C1A::CAMERON_FALLS_GS::ALEXAN DER_JCT, C1A::ALEXANDER_JCT::ALEXANDER_ GS, C1A::CAMERON_FALLS_GS::ALEXAN DER_JCT, C1A::ALEXANDER_JCT::ALEXANDER_ SS, C1A::ALEXANDER_JCT::ALEXANDER_ GS, C1A::ALEXANDER_JCT::ALEXANDER_ SS	CWW	4 Hour		
Nov 27 2006 9:00 AM	Dec 08 2006 7:00 PM	Margach DS: K6FT1-T2, K6F-9, 24T1-L	CWW	4 Hour		
Nov 01 2006 12:01 AM	Nov 21 2006 1:01 PM	WCoast Ft France CGS: 52-GTG	CWW	Non-Recallable		
Nov 01 2006 12:01 AM	Nov 11 2006 1:01 PM	WCoast Ft France CGS: 52-STG	CWW	Non-Recallable		
Jul 10 2006 11:00 AM	Jul 20 2006 6:00 PM	Fort Frances TS: B_BUS, 22-T3, T3, 22SC1.2-L, 22T3-B, 22T3-B	CWW	1 Day		

Table C7 Ottawa Zone

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Jul 09 2006 7:00 AM	Jul 19 2006 3:00 PM	Longueuil TS: T4, T4Q, T4-B5D	CWW	36 Hour	none	none
Nov 01 2006 7:00 AM	Nov 11 2006 6:00 PM	St.Lawrence TS: L24A::HAWTHORNE_TS::ST.LAWREN CE_TS, L24A::HAWTHORNE_TS::ST.LAWREN	CWW	8 Hour	B31L Delivery	None
Jun 12 2006 7:00 AM	Jun 30 2006 4:00 PM	Merivale TS: L29L30	CWW	24 Hour	none	none
Aug 14 2006 8:00 AM	Aug 25 2006 6:00 PM	Longueuil TS: T3, 62D5A-L26, 62D5A- L26, 62D5A-48, 62D5A-48, A1A2, T3-A1, T3-D5A, T3-D5A, T3J, T3-D5A, 48-D5A, D5A-2403, D5A::CUMBERLAND_JCT::ST.ISIDORE TS.	CWW	7 Hour	Beau Delivery, MacLaren Transfer Limit	Beau Delivery (Imports) reduced from 800MW to 400MW, Import from MacLaren via D5A reduced from 250MW to 0 MW
Nov 01 2006 5:00 AM	Nov 24 2006 6:00 PM	Hawthorne TS: DL24, L24A::HAWTHORNE_TS::ST.LAWREN CE_TS, L22L24, L24A::HAWTHORNE_TS::ST.LAWREN	CWW	8 Hour	B31L Delivery	None
Jun 25 2006 7:00 AM	Jul 04 2006 3:00 PM	Longueuil TS: T3J, T3, T3-D5A	CWW	36 Hour	None	None

Table C8 Southwest Zone

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Nov 26 2004 8:00 AM	Dec 25 2006 3:00 PM	Campbell TS: SC4, SC4Q	CWW	30 Minute		
Oct 16 2006 8:00 AM	Dec 22 2006 3:00 PM	Milton SS: KL570	CWW	5 Day		
Jul 17 2006 6:00 AM	Sep 29 2006 6:00 PM	Speedsville JCT: D7G::SPEEDSVILLE_JCT::C.G.E.JCT, D7G::FREEPORT_JCT::SPEEDSVILLE_ JCT, 60-D7G-67, D7G::FREEPORT_JCT::SPEEDSVILLE_ JCT, D7G::SPEEDSVILLE_JCT::C.G.E.JCT, 51-D7G-67	CWW	4 Hour		
Dec 29 2005 8:01 AM	Jan 31 2007 11:59 PM	Powerline MTS: T2Y	CWW	Non-Recallable		
May 29 2006 8:01 AM	Jun 30 2006 3:01 PM	Scheifele CTS: T2, T2-D7V	CWW	72 Hour		
Sep 11 2006 8:01 AM	Oct 06 2006 3:01 PM	Scheifele CTS: T4, T4-D6V, T1B, T4H, T1-D6V, T4T, T1	CWW	24 Hour		
Jun 19 2006 8:00 AM	Jun 30 2006 4:00 PM	Middleport TS: K1K2	CWW	3 Hour		
Jul 17 2006 5:00 AM	Jul 28 2006 4:00 PM	Middleport TS: T3L20	CWW	4 Hour		
Oct 12 2006 8:01 AM	Nov 10 2006 3:01 PM	Scheifele CTS: T2-D7V, T4T, T4-D6V, T4, T4H, T2, T2Y	CWW	24 Hour		
Nov 04 2006 6:00 AM	Nov 17 2006 5:00 PM	Lambton TS #2: PL26, T13, L23L29, KL29, T5L26, T2B, DL26, T2Y, L29C::LAMBTON_TS_#2::LYNWOOD_J CT, L29C::LAMBTON_TS_#2::LYNWOOD_J CT, L25L26, L29C::LYNWOOD_JCT::CHATHAM_SS, L26L::LONGWOOD_TS::LONGWOODJ CT, L26L::LAMBTON_TS_#2::LONGWOODJ CT, L26L::LAMBTON_TS_#2::LONGWOODJ CT, L51L29, L29C::LYNWOOD_JCT::CHATHAM_SS, T13J	DWW	12 Hour		
Aug 23 2006 6:00 AM	Aug 23 2006 4:00 PM	Lambton TS #2: P1_BUS	CWW	4 Hour	Lambton G2 is bottled	
Aug 24 2006 6:00 AM	Aug 24 2006 4:00 PM	Lambton TS #2: K1_BUS	CWW	4 Hour	Lambton G1 is bottled	
Sep 01 2006 6:00 AM	Sep 01 2006 5:00 PM	Lambton TS #2: K1_BUS	CWW	4 Hour	Lambton G1 is bottled	
Sep 02 2006 6:00 AM	Sep 02 2006 5:00 PM	Lambton TS #2: P1_BUS	CWW	4 Hour	Lambton G2 is bottled	
Sep 15 2006 6:00 AM	Sep 16 2006 5:00 PM	Lambton TS #2:K1_BUS, Lambton TS #2: P1_BUS	CWW	4 Hour	Lambton G1 & G2 are bottled	
Sep 29 2006 6:00 AM	Sep 30 2006 5:00 PM	Lambton TS #2: K1_BUS, Lambton TS #2: P1_BUS	CWW	4 Hour	Lambton G1 & G2 are bottled	
Dec 09 2006 6:00 AM	Dec 10 2006 4:00 PM	Lambton TS #2: K1_BUS, Lambton TS #2: P1_BUS	CWW	4 Hour	Lambton G1 & G2 are bottled	
Dec 11 2006 6:00 AM	Dec 12 2006 4:00 PM	Lambton TS #2: K1_BUS	CWW	4 Hour	Lambton G1 is bottled	
Apr 25 2006 12:45 PM	Dec 31 2006 11:59 PM	Middleport TS: 25-Q26M	CWW	Non-Recallable		
Apr 25 2006 12:45 PM	Dec 31 2006 11:59 PM	Middleport TS: 25-Q35M	CWW	Non-Recallable		

Table C9 Toronto Zone

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Dec 25 2006 7:00 AM	Jan 19 2007 2:30 PM	Bermondsey TS: T4-C14L, T4, T4B, T4Y	CWW	36 Hour		
Oct 02 2006 7:00 AM	Oct 13 2006 4:00 PM	Fairchild TS: SS1-X, T1B, B_BUS, BSC1, T2B, BY, BY	CWW	10 Hour		
Dec 25 2006 7:00 AM	Jan 20 2007 6:00 PM	Pickering B SS: L27R, L26L27, KL27, P27C::CHERRYWOOD_TS::PICKERIN G_B_SS, T5L27, P27C::CHERRYWOOD_TS::PICKERIN G_B_SS	CWW	2 Day		
Jan 02 2007 7:00 AM	Jan 23 2007 6:00 PM	Cherrywood TS: P8C::PICKERING_A_SS::CHERRYWO OD_TS, P8C::PICKERING_A_SS::CHERRYWO OD_TS, KL8, L8D, T2L8, L8L24	CWW	2 Day		
Oct 30 2006 6:00 AM	Dec 01 2006 5:00 PM	Bridgman TS: T14Y-B, T14X-H, T14-L14W, T14	CWW	10 Day		
Dec 25 2006 7:00 AM	Dec 30 2006 6:00 PM	Cherrywood TS: DL6, T1L6, L3L6, L6K, P6C::CHERRYWOOD_TS::PICKERING_A_SS, P6C::CHERRYWOOD_TS::PICKERING_A_SS	CWW	2 Day		
Jun 19 2006 7:00 AM	Jul 07 2006 2:30 PM	Cherrywood TS: L15L20	CWW	7 Hour		
Jan 02 2007 7:00 AM	Jan 17 2007 6:00 PM	Cherrywood TS: DL7, L7H, T3L7, L7L11, P7C::PICKERING_A_SS::CHERRYWO OD_TS, P7C::PICKERING_A_SS::CHERRYWO OD_TS	CWW	2 Day		
Aug 21 2006 7:00 AM	Aug 26 2006 2:30 PM	Agincourt JCT: C20R::AGINCOURT_JCT::CHERRYWO OD_TS, C20R::AGINCOURT_JCT::CAVANAGH_MTS, C20R::AGINCOURT_JCT::CAVANAGH_MTS, KL14, KL20, KL27, KL3, 88-C20R, C20R::FINCH_JCT::RICHVIEW_TS, C20R::FINCH_JCT::RICHVIEW_TS, C20R::FINCH_TS::FINCH_JCT, C20R::FINCH_TS::FINCH_JCT, C20R::AGINCOURT_JCT::FAIRCHILD_TS, C20R::AGINCOURT_JCT::FAIRCHILD_TS, KL20, 1K2, 80T4-C20R, 80T2-C20R, 81-C20R, 81-C20R, 81-C20R, L15L20, C20R::FAIRCHILD_TS::FINCH_JCT, C20R::AGINCOURT_JCT::CHERRYWO OD_TS, C20R::FAIRCHILD_TS::FINCH_JCT, T1-C20R, K2_BUS	CWW	7 Hour		
Jun 21 2006 12:00 PM	Jun 30 2006 2:30 PM	Pickering A SS: L8D	CWW	4 Hour		
Aug 21 2006 6:00 AM	Oct 19 2006 3:00 PM	Lennox TS: X520B::LENNOX_TS::BOWMANVILLE_SS, X521B::LENNOX_TS::BOWMANVILLE_SS, X521B::LENNOX_TS::BOWMANVILLE_SS, X520B::LENNOX_TS::BOWMANVILLE_SS	DWW	1 Hour		
Oct 10 2006 5:00 AM	Nov 17 2006 6:00 PM	Cherrywood TS: T14-HT14, T14-SS4, T14, T14-J	CWW	38 Day		
May 31 2006 8:00 AM	Jul 14 2006 2:00 PM	Claireville TS: W3L510	CWW	5 Day		
Jul 10 2006 7:00 AM	Jul 16 2006 2:30 PM	Pickering A SS: T2L8	CWW	6 Hour		
Aug 08 2006 7:00 AM	Aug 18 2006 2:30 PM	Pickering B SS: L27R	CWW	6 Hour		
Aug 21 2006 7:00 AM	Sep 02 2006 2:30 PM	Pickering B SS: T5Z	CWW	6 Hour		
Jul 01 2006 5:00 AM	Jul 09 2006 6:00 PM	Bowmanville SS: AL526, A1_BUS, H2A, A1-A2	CWW	4 Hour		
Apr 28 2006 1:00 PM	Sep 01 2006 6:00 PM	Parkway TS: 52-P22R	CWW	3 Hour		
Apr 28 2006 1:00 PM	Sep 01 2006 6:00 PM	Parkway TS: 52-P21R	CWW	3 Hour		
Oct 11 2006 7:00 AM	Oct 26 2006 2:30 PM	Cherrywood TS: JL550	CWW	6 Hour		
Oct 13 2006 7:00 AM	Oct 26 2006 2:30 PM	Cherrywood TS: L5T14	CWW	6 Hour		
Oct 27 2006 7:00 AM	Nov 02 2006 3:30 PM	Cherrywood TS: DT14	CWW	6 Hour		
Nov 06 2006 8:00 AM	Nov 12 2006 3:30 PM	Cherrywood TS: T14-HT14, T14-J, T14-SS4, T14, SS4-X, T14-SS4, T14-SS4	CWW	3 Hour		
Oct 30 2006 8:00 AM	Nov 15 2006 3:30 PM	Cherrywood TS: JL543	CWW	6 Hour		
Jul 10 2006 7:00 AM	Jul 15 2006 2:30 PM	Cherrywood TS: L18L30	CWW	6 Hour		

Table C10 West Zone

Start Date/Time	End Date/Time	Equipment	Outage Type	Recall	Impact	Reduction in Limit
Jun 28 2006 7:00 AM	Jun 29 2006 3:00 PM	Sarnia Scott TS: KL1	CWW	2 Hour		
May 29 2006 5:00 AM	Jun 29 2006 6:00 PM	Kimball JCT: N5K::KIMBALL_JCT::SARNIA_SCOTT_ TS, N5K::WALLACEBURG_TS::KIMBALL_J CT, N5K::KIMBALL_JCT::SARNIA_SCOTT_ TS, 1N5K-40, N5K::WALLACEBURG_TS::KIMBALL_J CT, 40-N5K	DNW	2 Hour		
Aug 23 2006 6:00 AM	Sep 02 2006 7:00 AM	Lambton TS #2: P1P2	CWW	4 Hour		
Aug 24 2006 7:00 AM	Sep 01 2006 7:00 AM	Lambton TS #2: K1K2	CWW	4 Hour		
Sep 17 2006 6:00 AM	Sep 26 2006 5:00 PM	Lambton TS #2: 27-L25N, KL25, L25L26, PL26, L25L26, 27-L26L	CWW	4 Hour		
Nov 27 2006 6:00 AM	Dec 06 2006 4:00 PM	Lambton TS #2: PL23, 27-L24L, L23L24, KL24, 27-L23N, L23L24, T5-L23	CWW	4 Hour		
Aug 01 2006 7:00 AM	Aug 25 2006 5:00 PM	Lambton TS #2: PS4-1, PS4, PS4-2	CWW	36 Hour		

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