

18-MONTH OUTLOOK:

An Assessment of the Reliability of the Ontario Electricity System

From April 2008 to September 2009



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Executive Summary

The reliability outlook for Ontario's electricity sector is positive for the next 18 months. More than 4,500 megawatts (MW) of new supply are scheduled to come into, or return to service, including approximately 3,100 megawatts (MW) of gas-fired generation, 800 MW of nuclear generation, 100 MW of hydroelectric generation and 700 MW of wind capacity. Most of the new supply projects have started their construction phase. There are also substantial changes planned to the transmission network over the next 18 months.

Over the next year and a half, there should be sufficient supply within Ontario to meet electricity demands under normal weather conditions. This assumes that the planned resource additions meet their stated in service dates and the amount of conservation forecast by the Ontario Power Authority (OPA) is achieved. If these dates and forecasts are not met or if either extreme weather or sub-par performance of existing equipment should occur, Ontario may still need to rely on imports from neighbouring jurisdictions to maintain reliability.

To date, the Independent Electricity System Operator (IESO) has generally limited generators to scheduling their planned maintenance outages during the fall and spring "shoulder months" when demand tends to be lower. With more domestic resources becoming available, limited opportunities now exist for the IESO to accommodate planned generator outages in the winter months as well. These opportunities should provide generators with more flexibility to schedule their maintenance outages which should in turn provide greater assurances going forward that Ontario's generation fleet will be well prepared for the high demand summer months.

Electricity supply from baseload generation including nuclear, hydroelectric and wind sources is expected to increase in the latter half of the Outlook period and may at times exceed demand. Through planning and coordination with market participants, the IESO will be addressing the expected periods of surplus generation to mitigate any potential impacts to reliability. Surplus baseload supply situations have occurred infrequently to date, and have always been accompanied by very low energy prices. The low prices not only serve to discourage additional supply in those hours, but also to encourage any market based pricing consumers to shift whatever consumption they can out of higher priced hours into these very low priced periods.

The Ontario transmission system is expected to be adequate to reliably supply normal demands over the next 18-months. Hydro One is planning to add seven new high voltage shunt capacitors at selected locations in southwestern Ontario, starting in May 2009. These facilities will help accommodate the additional nuclear and wind generation scheduled to come into service in the area prior to the incorporation of the

new 500 kilovolt (kV) transmission line out of Bruce. Until all additional elements are in service, transmission limitations may constrain delivery of some available supply from the Bruce or Southwestern Ontario areas.

Reliability within the Greater Toronto Area (GTA) for both summer 2008 and summer 2009 is expected to be adequate as new facilities are incorporated, but remains dependent on the availability of the autotransformers feeding the GTA, the availability of the Pickering units, and the planned additions of the Portlands Energy Centre and Goreway Station.

The new interconnection between Ontario and Québec is scheduled for completion by March 31, 2009. This will increase Ontario's import-export capability by 1,250 MW, which represents an increase in import capability of about 30%.

The forecast for peak and energy demand is lower than in the previous Outlook due to two main factors; lower industrial demand and conservation initiatives. The energy-intensive sectors of the Ontario economy continue to be impacted by a high Canadian dollar and a sluggish U.S. economy. The broader economy as a whole shows signs of a slowdown, which has further reduced forecast demand. In addition, the shift to a "conservation culture" is reducing peak and energy demand. These aspects, in conjunction with weather, will shape demand over the Outlook period. Energy demand is expected to grow by 0.4% for 2008 (152.2 TWh).

The following table summarizes the peak demands for the upcoming seasons under the Seasonal Normal and Extreme weather scenarios. These peak demands should be mitigated to some extent by the impacts of targeted conservation programs.

Season	Seasonal Normal Weather Peak (MW)	Extreme Weather Peak (MW)
Summer 2008	25,493	27,748
Winter 2008-09	24,335	25,400
Summer 2009	25,684	27,939

The IESO regularly assesses the adequacy and reliability of Ontario's power system. This 18-Month Outlook provides the IESO's assessment of the reliability of the power system from April 2008 to September 2009. It reflects the most up-to-date forecast information as well as experience gained from past operations.

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

- End of Section

Caution and Disclaimer

The contents of these materials are for discussion and information purposes and are provided “as is” without representation or warranty of any kind, including without limitation, accuracy, completeness or fitness for any particular purpose. The Independent Electricity System Operator (IESO) assumes no responsibility to you or any third party for the consequences of any errors or omissions. The IESO may revise these materials at any time in its sole discretion without notice to you. Although every effort will be made by the IESO to update these materials to incorporate any such revisions it is up to you to ensure you are using the most recent version.

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1.0 Introduction

This Outlook covers the 18-month period from April 2008 to September 2009. It supersedes the report titled “An Assessment of the Reliability of the Ontario Electricity System from January 2008 to June 2009”, dated December 17, 2007.

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 April 2008 to September 2009” (IESO_REP_0473) (found on the IESO web site at http://www.ieso.ca/imoweb/pubs/marketReports/18Month_ODF_2008mar.pdf)
 - o 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_2007dec.pdf)
 - o 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_2008mar.pdf)
 - o Provides specific details on the transmission system, including the major internal transmission interfaces and interconnections with neighbouring jurisdictions.

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

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

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

In addition to the comprehensive Outlook, the IESO periodically issues Interim Updates to the 18-Month Outlook between full Outlooks. These updates include a spreadsheet which reflects changes to Total Resources, Total Reductions in Resources, and Reserve Above Requirement values for the Planned Resource Scenario. The updates also include a summary of actual demand and forecast demand data. Similar to the full Outlooks, the Interim Updates are posted on the IESO web site. These updates provide Outlook information on a more frequent basis to allow market participants to better adjust their operational plans and outage schedules.

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

- End of Section -

2.0 Updates to This Outlook

2.1 Changes to Demand Forecast

The demand forecast has been updated to include the actual demand, weather and economic experience through to the end of January 2008. The economic outlook has been updated based on the most recent data.

Overall, the updated demand forecast has lower peak and energy demands compared to the previous Outlook due to economic impacts and conservation efforts.

2.2 Updates to Resources

Since the previous Outlook report was published, the net installed capacity connected to the IESO grid has increased by 83 MW. The increase is made up by the Ripley Wind Power Project (76 MW) and an upgrade (7 MW) to an existing nuclear unit

There have been updates to the generator outages submitted by market participants. For this Outlook, generation outage plans submitted to the IESO's Integrated Outage Management System (IOMS) as of February 20, 2008 were used.

2.3 Updates to Transmission Outlook

The list of transmission projects, planned transmission outages and actual experience with forced transmission outages have been updated from the previous 18-Month Outlook. For this Outlook, transmission outage plans submitted to the IOMS as of January 22, 2008 were used.

This Outlook also presents discussions on the major transmission enhancements that are forecast to be in service or are under construction within the outlook period, and the effects of generation and transmission project delays on the system's ability to supply the forecast peak demand.

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3.0 Historical Review

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

3.1 Weather and Demand Historical Review

The winter weather of 2007-08 however has been much more typical than in recent years. December's peak came in just below 23,000 MW as temperatures in Toronto dropped below 3° C. January was milder than normal and the peak was only 22,782 MW, the lowest January peak since 2002. Although February data has not been incorporated into this report, the weather has been much colder than normal and peak demand did exceed 23,000 MW.

3.2 Operating Procedure Events

On June 12, 2007 a 5 percent voltage reduction was carried out due to overall adequacy after a transmission contingency rejected 744 MW of generation in the northeast during a period of higher than forecast demand. On June 26, 2007, the IESO asked consumers in the GTA to reduce their use of electricity during peak demand times over the next two days due to excessive autotransformer loadings in the GTA. On August 2, 2007 Ontario experienced hotter temperatures than average in which the IESO made a public appeal for consumers to reduce their electricity consumption.

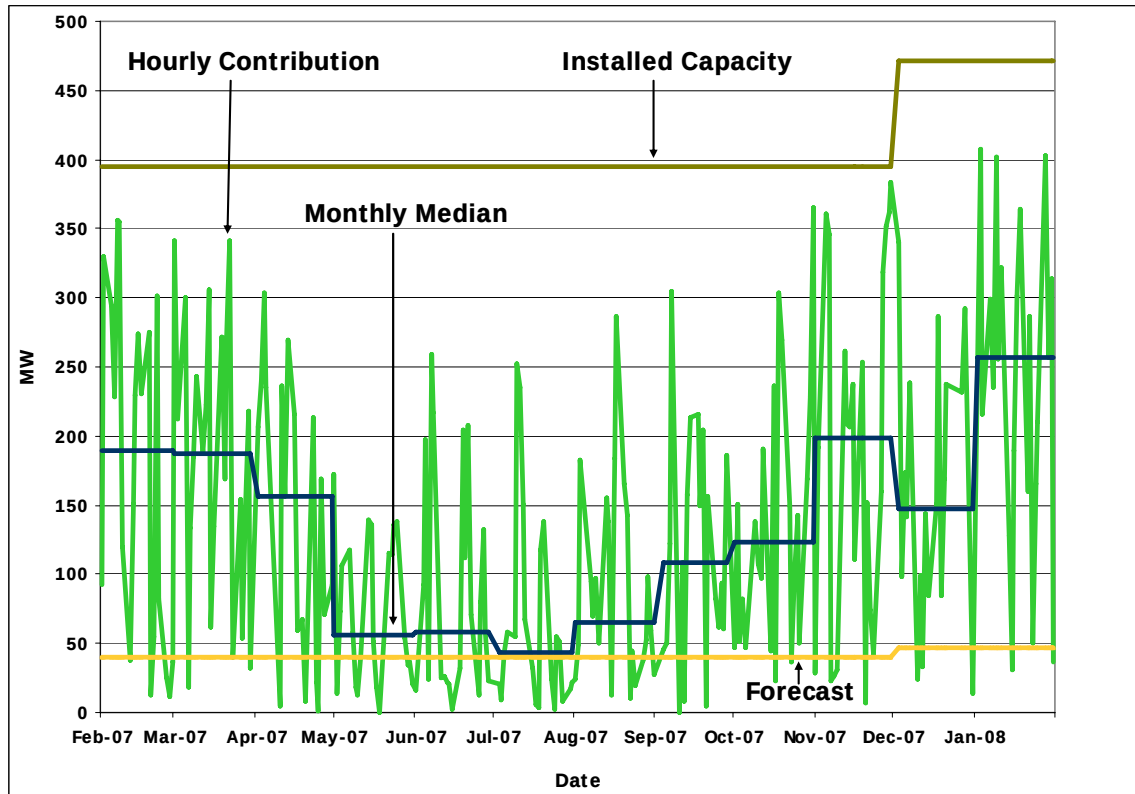
3.3 Hourly Resource Contributions at Time of Weekday Peak

The figures 3.1 and 3.2 show the contributions made by wind and hydro generators at the time of weekday peak for the period from February 1, 2007 to January 31, 2008. The holiday data was removed from the display of actual hourly data, which tends to eliminate severe spikes in hourly contributions.

During the period of February 2007 and January 2008 the IESO does not see emerging trends or problems in the areas of wind or the net interchange in Ontario. Looking forward, the IESO will address any potential issues in operability studies and stakeholder engagement plans.

Figure 3.1 indicates the wind generation contributions to the wholesale market at the time of peak demand, excluding holidays, compared to the forecast contributions. Currently, IESO assumes an available wind generation contribution of 10 percent of installed capacity, held constant throughout the year. The forecast methodology does not account for seasonal variances in wind patterns, and thus, results in large deviations of actual monthly median contribution from forecast during winter months as compared to summer months.

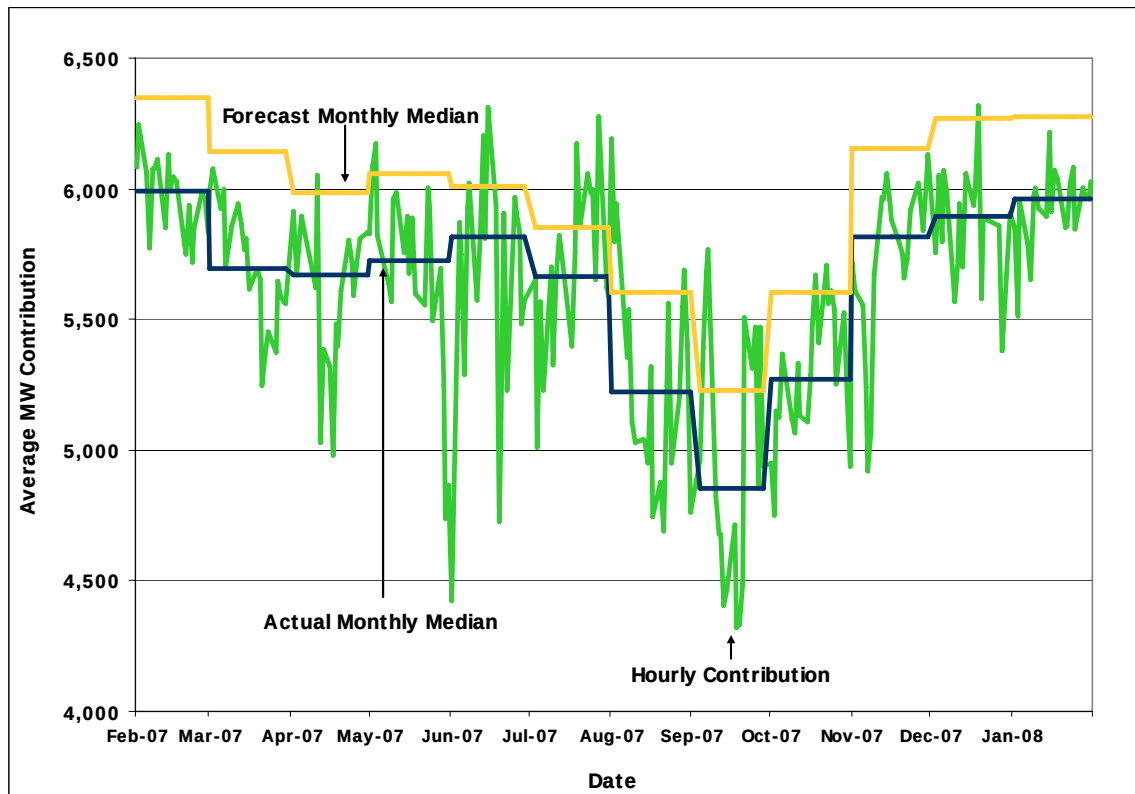
Figure 3.1 Wind Generation Contributions at the Time of Peak Demand



The IESO is developing monthly assumptions for wind capacity contribution and will incorporate these once technical and stakeholder review has been completed.

Figure 3.2 indicates the actual hydro contributions to energy and operating reserve markets at the time of non holiday weekday peak from February 1, 2007 to January 31, 2008, compared to forecast contributions. The forecast is based on the actual monthly median contributions from May 1, 2002 to April 30, 2007. The forecast values for the past 15 months have been an average 5 percent greater than the actual hydro contributions. The IESO is continuing to monitor the situation and will consider adjustments as appropriate.

Figure 3.2 Hydro Contributions (Energy and Operating Reserve) at the Time of Weekday Peak



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4.0 Demand Forecast

The forecast of demand has been updated to reflect the most recent economic, weather and demand information. The Ontario economy continues to be influenced by a number of key developments:

- A Canadian dollar at or near parity with the U.S. dollar and its impact on Ontario's export oriented manufacturing sector.
- A weaker U.S. economy and its impact on Ontario's economy. The close ties between the two and the relative size of the U.S. economy can have implications on our own economic cycle. In particular, the Ontario automotive sector is very dependant on sales south of the border.
- Low interest rates will continue to boost investment. Construction, business investment and domestic consumption have been a strength of the Ontario economy. With further rate cuts likely this will continue to help spur growth in the non-industrial sectors.

The demand models were updated and re-estimated to capture the most recent actual data and economic forecast.

For 2007 actual demand showed a modest increase over 2006 (0.8%). After correcting for weather it shows a small decline (-0.5%). Weather-corrected energy demand continues to lag last year's demand levels due to both consumption efforts and lower demand from energy-intensive industry. In 2007, demand from directly connected industry dropped 4.9% - which followed a 6.8% and 4.6% decline in the previous two years. Peak demands, though lower than the previous forecast, are expected to grow as the weather sensitive portion of demand is driven by the residential and commercial sectors. These sectors are being boosted by the lower interest rates. Overall, conservation savings being pursued by a number of market participants, including the OPA will mitigate this growth in both peak and energy 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. The IESO focuses on two demand forecast scenarios, which are based on:

- Monthly Normal weather; and
- Extreme weather.

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

In addition to the weather scenarios, the demand forecast has two scenarios that differ in their treatment of conservation. The Planned Resource scenario includes the impacts of additional conservation programs and initiatives by the OPA and electricity distributors. These impacts are decremented from the forecast. The Firm Resource scenario shows demand with only the existing level of conservation. Demand measures, such as dispatchable loads and responsive demand, are treated as a resource and are further covered in Section 5.1 and 5.2. Table 4.1 shows the various conservation and demand management components and their treatment under the two scenarios.

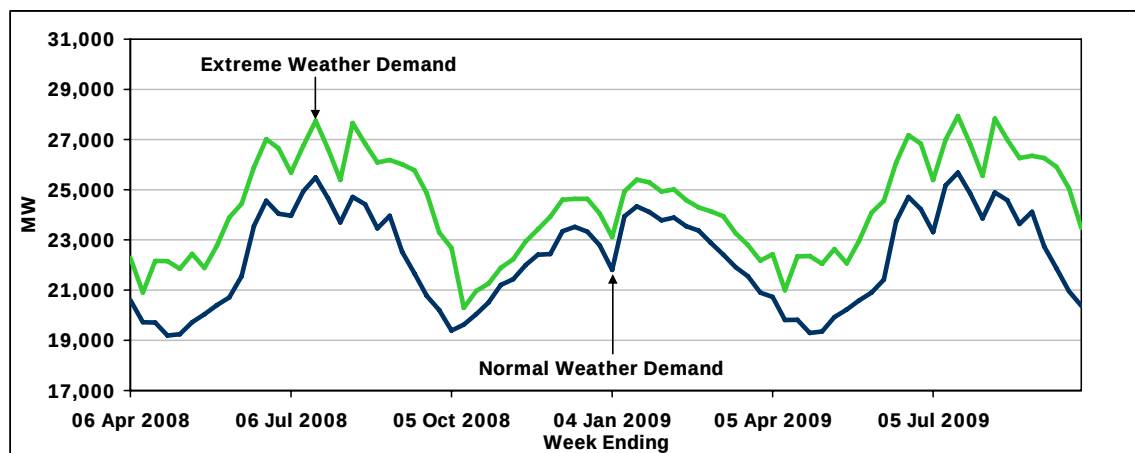
Table 4.1 Conservation and Demand Management Scenarios

Conservation and Demand Management Components	Firm Scenario	Planned Scenario	Treatment
Conservation	Existing levels included	Targeted levels included	Decrement demand
OPA Demand Response 1	Existing levels included	Targeted levels included	Resource
OPA Demand Response 2	None	Targeted levels included	Resource
OPA Demand Response 3	None	Targeted levels included	Resource
OPA Contracted Demand Response	Existing levels included	Existing levels included	Resource
IESO Dispatchable Demand	Existing levels included	Existing levels included	Resource

Economic and demographic growth will be the factors driving energy and peak demand up during the forecast, and conservation will act to slow that growth. Under the Firm Resource Scenario energy demand will increase 0.4% in 2008 (152.2 TWh) and 0.1% in 2009 (152.3 TWh). The summer 2008 monthly normal peak is expected to be 25,493 MW. Under the Planned Resource scenario energy demand is expected to decrease by 0.1% in 2008 3(151.41 TWh) and 0.7% in 2009 (150.40 TWh) as conservation initiatives further reduce electricity demand. Under this scenario, the monthly normal peak demand for the summer of 2008 is expected to be 24,892 MW.

Figure 4.1 shows the Monthly Normal and Extreme (Firm Resource Scenario) weather demands assumed for each week in the study period.

Figure 4.1 Demand Forecast Range



For further discussion of how we identify peak demands and treat demand measures please refer to the Ontario Demand Forecast document, Section 3.0 *Forecasting Process and Assumptions*.

- End of Section -

5.0 Resource Adequacy Assessment

This section provides an assessment of the adequacy of resources to meet the forecast demand. From this assessment generator owners receive guidance for planning outages. When planned outages would adversely affect the reliability of the grid, as indicated by reserves below required levels, the IESO has the authority to deny approval of outages based on their order of precedence.

In recognition of the uncertainty that exists regarding the future availability of resources, two resource scenarios are described in this section: the Firm Resource Scenario (FRS) and the Planned Resource Scenario (PRS).

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

The demand forecast for the PRS includes conservation measures that are not part of the FRS.

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

As was reported in the previous report, the supply picture is expected to change significantly. More than 4,500 MW of new supply are scheduled to come into, or return to service, including approximately 3,100 MW of gas-fired generation, 800 MW of nuclear generation, 100 MW of hydroelectric generation and 700 MW of wind capacity. Most of the new supply projects have started their construction phase. In addition, the new interconnection with Quebec will increase transfer capabilities by 1,250 MW.

Table 5.1 Existing Installed Generation Resources

Fuel Type	Total Capacity (MW)	Number of Stations
Nuclear	11,426	5
Hydroelectric	7,788	68
Coal	6,434	4
Oil / Gas	5,103	22
Wind	471	5
Biomass / Landfill Gas	75	5
Total	31,297	109

5.1 Planned Resource Scenario with Normal and Extreme Weather

Resource Assumptions

The PRS assumes quantities of demand measures and generation capacity based on existing resources plus significant resource changes that are scheduled to occur within the 18-month study period. These include:

- A. Existing Installed Resources: total capacity of 31,297 MW (refer to Table 5.1)
- B. New generation facilities and capacity changes to the existing facilities (refer to Table 5.2)
 - o Includes generation projects in the IESO's Connection Assessment and Approval Process (CAA) that are under construction and projects contracted by the OPA. 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 at <http://www.ieso.ca/imoweb/connassess/ca.asp>.
 - o The estimated effective date shown in Table 5.2 indicates the date on which additional capacity is assumed to be available to meet Ontario demand. For projects that are under contract, the estimated effective date is the best estimate of the date when the contract requires the additional capacity to be available. In the event that a project is delayed, such that the commercial in-service date is expected to be later than the contract date, the estimated effective date will be the best estimate of the commercial in-service date for the project.
- C. Demand Forecast:
 - o The demand forecast is reduced for the impacts of targeted conservation.
 - o Demand measures include dispatchable loads and loads contracted with the OPA which vary from 411 MW to 541 MW (refer to column "Demand Measures" in Table A2 or A7 in Appendix A).
 - o Based on historical data, it is assumed that 55% of dispatchable demand is available at the time of the weekly peak.
 - o Demand measures are forecast based on market participant information and actual market experience.

Table 5.2 Committed and Contracted Generation Resources

Proponent/Project Name	Zone	Fuel Type	Estimated Effective Date	Project Status	Capacity Considered in Resource Scenario (MW)	
					FRS	PRS
Durham College District Energy Project	Toronto	Gas	2008-Q1	Construction	2	2
Great Northern Tri-Gen Facility	West	Gas	2008-Q2 ⁽¹⁾	Commissioning	12	12
Countryside London Cogeneration Facility	West	Gas	2008-Q2	Construction	12	12
Portlands Energy Centre Phase I	Toronto	Gas	2008-Q2	Construction	250	250
Warden Energy Centre	Toronto	Gas	2008-Q2	Construction	5	5
Umbata Falls Hydroelectric Project	Northwest	Water	2008-Q2	Construction	23	23
Lac Seul Project - English River	Northwest	Water	2008-Q3 ⁽¹⁾	Construction		13
Greenfield Energy Centre	West	Gas	2008-Q4	Construction		1,005
Kruger Energy Port Alma Wind Power Project	West	Wind	2008-Q4	Construction		101
Wolfe Island Wind Project	East	Wind	2008-Q4	Approvals & Permits		198
Nuclear Upgrade	N/A	Uranium	2008-Q4	Construction	27	27
Melancthon II Wind Project	Southwest	Wind	2008-Q4	Construction		132
Enbridge Ontario Wind Power Project	Southwest	Wind	2008-Q4	Construction		200
Retirement of Lower Sturgeon 25 Hz generation to convert to 60 Hz	Northeast	Water	2009-Q1	Connection Assessment	-5	-5
St. Clair Energy Centre	West	Gas	2009-Q1	Construction		570
Return of Unit 7 at Beck 1 as a 60 Hz unit	Niagara	Water	2009-Q1	Construction	59	59
Retirement of Sandy Falls 25 Hz generation to convert to 60 Hz	Northeast	Water	2009-Q2	Connection Assessment	-3	-3
Goreway Station	Toronto	Gas	2009-Q2 ⁽¹⁾	Construction		860
Retirement of the 25 Hz Frequency Changer and Units 1 & 2 at Beck 1	Niagara	Water	2009-Q2	Connection Assessment	-50	-50
Algoma Energy Cogeneration Facility	Northeast	Industrial Gas	2009-Q2	Construction		63
Portlands Energy Centre Phase II	Toronto	Gas	2009-Q2	Construction		288
Bruce Unit 2	Bruce	Uranium	2009-Q2	Construction		750
East Windsor Cogeneration Centre	West	Gas	2009-Q2	Construction		84
Total					331	4,594

Notes to Table 5.2:

The total may not add up due to rounding.

(1). The estimated effective quarter and/or the year for the project has changed from the last Outlook.

Project status provides a general indication of the project progress. The standard milestones used are: Connection Assessment, Approvals & Permits, Construction, and Commissioning.

- o “Connection Assessment” indicates that the project is undergoing a system impact assessment with the IESO.
- o “Approvals & Permits” indicates that the project proponent is in the process of acquiring major approvals and permits required to start construction (e.g. environmental assessment, municipal approvals etc). “Construction” means that the project is under construction,
- o “Commissioning” indicates that the project is undergoing commissioning tests with the IESO.

Connection Assessment may run concurrently with the other three milestones which are sequential.

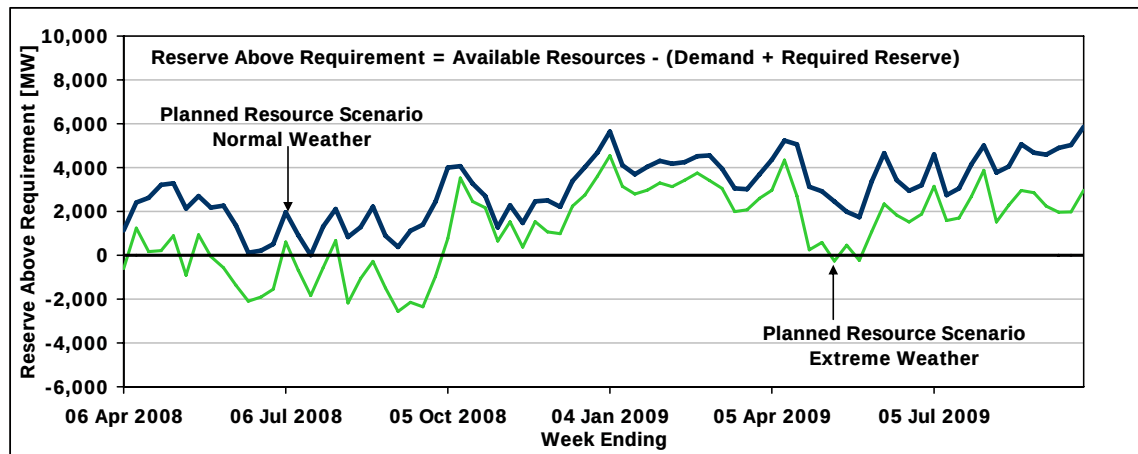
The generation capability assumptions are as follows:

- Hydroelectric capability, which includes energy and operating reserve is based on median historical values of hydroelectric hourly energy production and capacity contribution to operating reserve during weekday peak demand hours from May 2002 to April 2007.
- Capacity and energy contributions from thermal generators based on market participant submissions, including planned outages, expected forced outage rates and seasonal deratings.
- Wind-powered generation capacity at the time of weekday peak is assumed to be 10% and total energy contribution is assumed to be 30%,

Weekly Adequacy Assessments

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

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



5.2 Firm Resource Scenario with Normal and Extreme Weather

Resource Assumptions

The FRS assumes quantities of demand measures and generation capacity based on the existing resources and a limited set of planned capacity increases or additions (refer to Table 5.2, column labeled "FRS" under heading "Considered in Resource Scenario"). This scenario includes:

- Existing Installed Resources: total capacity of 31,297 MW (refer to Table 5.1).
- Capacity changes to some existing facilities.
- Additional generating resources that have started their commissioning activities with contributions beginning on the date that the facility is expected to be in-service.
- Additional generating resources that are expected to become available in the first three months of the Outlook study period (regardless of commissioning status), with contributions beginning on the date that the facility is expected to be in-service.

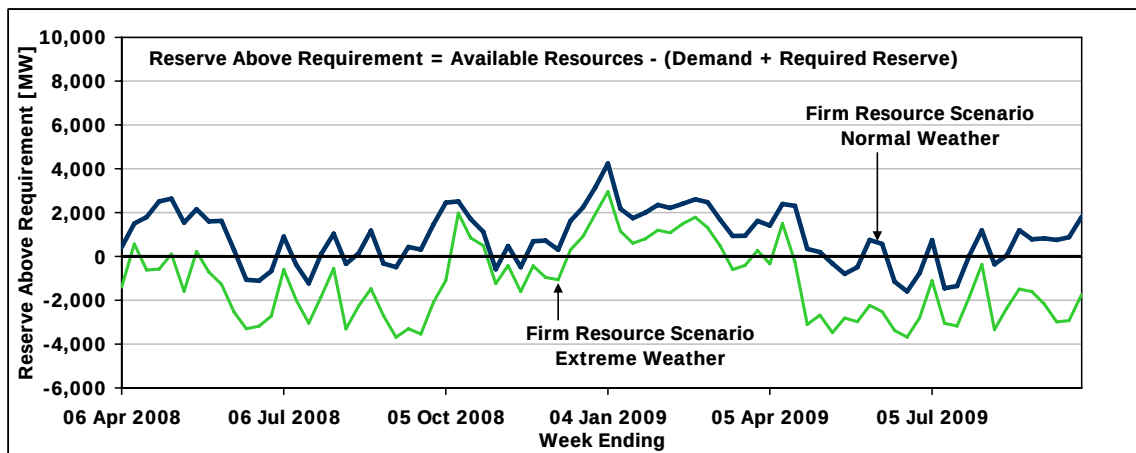
- E. Existing demand measures assumed at 298 MW for the entire period of the Outlook (refer to column “Demand Measures” in Table A1 or A6 in Appendix A). Demand values (Table A4 in Appendix A) exclude targeted conservation.

With respect to forecasts of generation capabilities, the FRS is based on the same assumptions as the PRS.

Weekly Adequacy Assessments

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

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



5.3 Comparison of Resource Scenarios

Table 5.3 shows a snapshot of the forecast available resources, under the two scenarios, at the time of the seasonal peak demands over the study period.

The monthly forecast of energy production capability, as provided by market participants, is included in Appendix A, Table A7.

Table 5.3 Summary of Available Resources

Notes	Description	Summer Peak 2008		Winter Peak 2009		Summer Peak 2009	
		Firm Resource Scenario	Planned Resource Scenario	Firm Resource Scenario	Planned Resource Scenario	Firm Resource Scenario	Planned Resource Scenario
1	Installed Resources (MW)	31,601	31,601	31,628	33,276	31,632	35,891
2	Imports (MW)	0	0	0	0	0	0
3	Total Resources (MW)	31,601	31,601	31,628	33,276	31,632	35,891
4	Total Reductions in Resources (MW)	3,600	3,333	2,782	3,456	3,620	4,538
5	Demand Measures (MW)	298	541	298	541	298	541
6	Available Resources (MW)	28,299	28,809	29,144	30,361	28,310	31,895

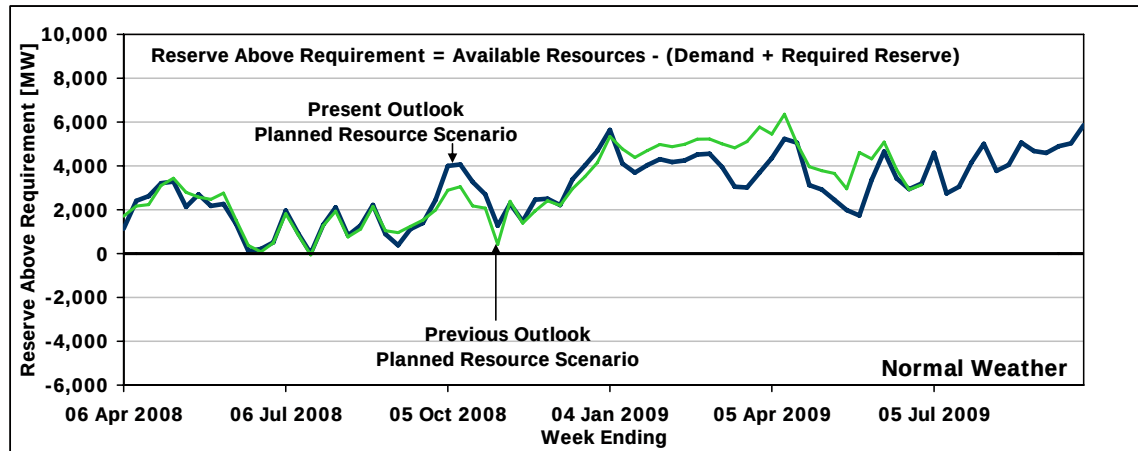
Notes to Table 5.3:

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

Weekly Adequacy Assessments

Figure 5.3 provides a comparison between the forecast Reserve Above Requirement values in the present Outlook and the forecast Reserve Above Requirement values in the previous Outlook published on December 17, 2007.

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



5.4 Resource Adequacy Risks

The forecast reserve levels for both the FRS and the PRS should be assessed bearing in mind the risks discussed below.

5.4.1 Extreme Weather

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

In order to illustrate the impact of extreme weather on forecast reserve levels during the Outlook period, both the FRS and the PRS 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). 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 (as seen earlier in Figures 5.1 and 5.2), clearly illustrates there are circumstances under which reliance on a combination of interconnected supply, rejection of planned generator maintenance or emergency actions may be required. This emphasizes the continued need for a mix of resources that provides for a reliable supply, conservation programs and demand measures within Ontario.

5.4.2 New Facilities

For the 18 month period under study, the improving demand-supply situation, seen mainly in the PRS, is dependent on the additional generation, conservation programs and demand measures coming into service as forecast. Some of the risks the projects face are regulatory approvals, construction delays and untimely equipment deliveries by suppliers. Many timely regulatory approvals for a significant number of the new supply projects and transmission enhancements are required in a short period of time

Some transmission delays have already been experienced and others are growing in potential. The development of expedited, but thorough, approvals processes is needed to ensure timely completion of the new facilities.

Since the last report, most of the projects have started their construction phases. While there will undoubtedly be adjustments to schedules between now and when each facility is declared commercially in service, having these projects under construction represents a significant reduction in risk for the future

The OPA monitors and reports on the progress of the electricity supply contract projects on a quarterly basis at their web site found below:

<http://www.powerauthority.on.ca/Page.asp?PageID=122&ContentID=6465&SiteNodeID=120>

5.4.3 Generator Planned Outages

A number of large generating units are scheduled to return to service from outage prior to summers 2008 and 2009. 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 other planned generator outages.

With the transition from winter peaking to summer peaking over the last number of years Ontario has experienced several years where the dual peaking nature of the Ontario system (roughly equivalent peaks in winter and summer) meant that outages must be scheduled in shorter spring and fall periods. Inevitably this meant that some long duration outages had to be scheduled into the start of the peak seasons, creating the potential that any extensions of these outages would occur when the generation is most needed.

To date, the Independent Electricity System Operator (IESO) has generally limited generators to scheduling their planned maintenance outages during the fall and spring “shoulder months” when demand tends to be lower. With more domestic resources becoming available, limited opportunities now exist for the IESO to accommodate planned generator outages in the winter months as well. These opportunities should provide generators with more flexibility to schedule their maintenance outages which should in turn provide greater assurances going forward that Ontario’s generation fleet will be well prepared for the high demand summer months.

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 number and magnitude 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.

5.4.4 Lower than Forecast Generator Availability

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

5.4.5 Lower than Forecast Hydroelectric Resources

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

Water-flow conditions are primarily influenced by the amount of precipitation received. To accurately forecast precipitation amounts far in advance is not possible. Drought conditions over some or all of the study period would lower the amount of generation available from hydroelectric resources. Low water conditions can result in significant challenges to maintaining reliability, as was experienced in the summer of 2005.

5.4.6 Wind Resource Risks

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

- the wind isn't blowing, or
- extreme cold weather or high wind speeds necessitate that wind generator output be curtailed to prevent equipment damage (these conditions are expected to be rare).

The geographic diversity of Ontario wind resources, as levels increase, should mitigate some of the risk associated with wind speed variability.

IESO is examining wind issues with stakeholders in the Wind Power Standing Committee (SE-29). The assumed capacity factor at the time of the peak is an issue this stakeholdering process is examining.

5.4.7 Capacity Limitations

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

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

For example, there are risks that gas-fired generators may not be capable of producing the maximum capacity that the market participant has forecast to be available at the time of peak. The natural gas and electricity sectors are converging as natural gas becomes one of the more common fuels in North America for electric power generation. The IESO is jointly working with the Ontario gas transportation industry to identify and address issues.

5.4.8 Transmission Constrained Resource Utilization

Transmission constraints may occur more often than expected due to multiple unplanned outages and may also have greater impact than expected on the ability to deliver generation to load centres. Transmission equipment failures could occur and significantly impact the utilization of resources until repairs are made. This is particularly true for large transformers whose repair or replacement time can be much longer than for transmission lines. Although a large number of transmission limitations are modeled in accordance with recognized reliability standards, there is a risk that certain transmission limitations resulting from multiple forced transmission outages, which exceed the levels modelled, may have an unforeseen impact.

Constraints may also occur due to weather conditions that result in high demand and contribute to higher than normal equipment limitations. For example periods of low wind combined with hot weather not only cause higher demands but also result in lower transmission capability. This can affect the utilization of internal generation and imports from neighbouring systems. Transmission constraints that result from loop flows can be particularly hard to predict because they result not only from the conditions within Ontario but from the dynamic patterns that are taking place within and between other areas.

During high demand periods, the availability of high-voltage capacitors and the capability of generators to deliver their full reactive capability also becomes critically important to permit the higher power transfers that are required. Outages or de-ratings to these reactive resources can restrict power transfer from generators and imports, and make it difficult to satisfy the peak demands.

5.4.9 Conservation and Demand Management

Since the targeted levels of conservation and demand management are significant, there is an associated risk should actual results fall short of those targets. The risk comes from both the level and the timing of conservation and demand management impacts. The PRS includes the impact of those targets and allows the IESO to study the benefits to system reliability from conservation and demand management programs. However, due to the ambitious nature of these targets it is prudent to study system reliability under the FRS which does not include those demand reductions.

5.5 Surplus Supply Scenarios

Previous reports have focused exclusively on peak demand periods. However, reliability risks can also occur when electricity demand is at its lowest such as during the overnight and weekend hours of temperate weather periods. Certain types of generation such as nuclear and some hydroelectric generators must maintain minimum output levels to ensure the generation is available in future high demand hours, or to respect environmental or other operational

constraints. At the same time, wind generators can also be contributing, as they operate whenever they have the right conditions.

Electricity supply from baseload generation including nuclear, hydroelectric and wind sources is expected to increase in the latter half of the Outlook period and may at times exceed demand. Through planning and coordination with market participants, the IESO will be addressing the expected periods of surplus generation to mitigate any potential impacts to reliability. Surplus baseload supply situations have occurred infrequently to date, and have always been accompanied by very low energy prices. The low prices not only serve to discourage additional supply in those hours, but also to encourage any market based pricing consumers to shift whatever consumption they can out of higher priced hours into these very low priced periods.

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6.0 Transmission Reliability Assessment

This section provides an assessment of the reliability of the Ontario transmission system for the 18 month study period of this Outlook.

A main objective of the transmission reliability assessment is to introduce all major transmission and load supply projects that are planned for completion during the next 18 months and to present their reliability benefits.

A second objective 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.

A third objective 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, planned transmission outages are reviewed in correlation with major planned resource outages and also the scheduled completion dates of new generation and transmission projects to identify transmission system reliability concerns and to highlight those outages that should be rescheduled or changed.

6.1 Transmission Projects

The IESO relies on the transmitters to provide information on the transmission projects that are planned for completion within the 18 month period. The complete list of major transmission projects is shown in Appendix B. The list also includes some projects with in-service dates just outside the period under study. Projects that are either in service or whose completion has been deferred well beyond the period of this outlook were removed from the list. The list includes only the transmission projects that represent major modifications or are considered to provide significant improvement to system reliability. Minor transmission equipment replacements or refurbishments are excluded. For projects assessed or being assessed under the Connection Assessment and Approval process, the assigned identification number is included for cross referencing.

Additional information regarding the transmission projects that have been assessed by the IESO can be found at the IESO's Connection Assessments web page, at the following location:
<http://www.ieso.ca/imoweb/connAssess/ca.asp>.

6.2 Load Supply Enhancements

The electricity demand growth experienced in Ontario in the last decade has resulted in a number of area loads reaching or exceeding the capability of the existing transformer stations. To address this problem and provide additional transformer capacity for future load growth, Ontario transmitters and distributors have initiated plans to build new transformer stations and replace existing transformers where appropriate. Five new and upgraded load supply transformer stations will be placed in service during the timeframe of this Outlook and shortly after.

Connection assessments performed by the IESO concluded that the new and upgraded transformer stations will provide relief to the existing stations, some of which are presently overloaded, and will improve the supply to various load areas. In some other cases the IESO found that the local transmission system may be reaching its maximum capability and identified the need for additional transmission reinforcements and installation of local voltage support equipment. In response to these findings the transmitter, Hydro One, initiated the installation of reactive compensation at a number of locations in the system.

Transmission assessments performed by transmitters in collaboration with local distribution companies also identified transmission reinforcements required to ensure adequate deliverability of supply to meet the Ontario electricity demand. The required reinforcements were also confirmed by the IESO during connection assessments performed for various new facilities. A number of such transmission reinforcements are currently under construction and planned for service during the study period of this Outlook. The new Essa to Stayner 230 kV transmission lined and voltage support devices installed at number of stations are examples of new transmission reinforcements that will be in service by the end of 2009 and result in an increase in load supply security.

The implementation of these projects will provide considerable improvements to the load supply reliability beyond the timeframe of this Outlook.

6.3 Planned Transmission Outages

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 additional outage requirements and changes are expected 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 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 interconnection limits. Where multiple outages are scheduled during the same period, the combined effect of all outages on the reduction in transmission interface and interconnection limits is presented. Where multiple outages are scheduled during the same period and reliability is affected the IESO requests the transmitter to reschedule some of the outages. 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).

The planned transmission outages are also reviewed in correlation with major planned resource outages and also the scheduled completion dates of new generation and transmission projects 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 rescheduling the outage, reducing the scheduled duration or reducing 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. 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 January 22, 2008 were used.

There is a substantial number of planned outages identified during the period of this Outlook that are required to accommodate system maintenance or future changes. Their specific impact on reliability is identified in subsequent sections of this report.

6.4 Transmission System Adequacy

The Ontario transmission system with the planned system enhancements is expected to be adequate to supply the demand under the normal weather conditions forecast for the 18-month period of this Outlook. However, an assessment of the scheduled generation outages in conjunction with the transmission outages and in conjunction with the projected capability of the transmission interfaces and the inter-ties shows that Ontario may be faced with a tight supply situation during the first two weeks of September 2008. If extreme weather conditions occur at this time, some of these outages may have to be rescheduled.

IESO Outlooks identify 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 for the conditions forecast in the planning period. This could result in congestion of low priced resources that must be replaced by higher priced resources, and would increase costs to market loads. Where the loading was projected to exceed the capability of the transmission facilities, there is also an increased risk of load interruptions.

IESO continues to work with Hydro One and other Ontario transmitters, to identify the highest priority transmission needs, and to ensure that those projects whose in service dates are at risk are given as much priority as is practical, especially those addressing reliability needs for summer 2008 and 2009. IESO has also been working closely with the OPA to specify the locations, timing and minimum generation requirements to satisfy reliability standards.

6.4.1 Toronto and Surrounding Area

The greater Toronto area electricity supply is mainly provided by the Trafalgar, Claireville, Parkway and Cherrywood autotransformers and Pickering GS units as depicted in Figure 6.1. The availability of these facilities is critical to ensure adequate electricity supply for Toronto and surrounding area.

Figure 6.1 Greater Toronto Area Electricity System



Following last year's outages and deratings associated with the 500/230 kV autotransformers, Hydro One implemented an extensive auto transformer remediation program. One spare autotransformer is currently available and two additional spares autotransformers will be available before to the end of 2008.

For the summer 2008 and summer 2009 extreme weather forecast conditions, the projected power flows over the Trafalgar, Claireville and Cherrywood autotransformers, with all elements in service, are expected to be within their continuous capability but the total station spare capability will be low. For summer 2008, the spare capability at Claireville, the highest loaded

autotransformer station in the area, may go as low as 4%. With one autotransformer out of service the continuous capability of some autotransformers may be exceeded but the loading will be within their long term emergency capability, which is only available for a limited time. Load reduction measures may be required following the unlikely forced outage of one additional autotransformer at Claireville or Cherrywood to reduce the remaining autotransformer loadings within applicable limits. For summer 2009, the presence of Goreway Station will reduce the loading of Claireville autotransformers to below their continuous ratings even when one transformer is out of service. Following the loss of an additional transformer at Claireville load reduction measures will likely not be required.

During summer 2008 and 2009, the reliable supply of GTA loads under extreme weather forecast conditions requires that all autotransformers at Trafalgar, Claireville, Parkway and Cherrywood and a minimum of four Pickering units be in service. Under these minimum conditions equipment loading should not exceed the long term emergency capability following the forced outage of one autotransformer at Trafalgar, Claireville or Parkway or one additional Pickering unit. Subsequent forced outages may require load curtailment to reduce the loading of remaining autotransformers within long term emergency limits.

Cherrywood autotransformer loading is strongly influenced by Pickering generation. If two Pickering units connected to the same 230 kV Cherrywood bus are unavailable, load reduction measures may be required to prevent equipment overloading following the loss of one Cherrywood autotransformer connected to the same bus. Availability of the Portlands Energy Centre generation may reduce, but is unlikely to fully eliminate, the necessary amount of load curtailment for Cherrywood area outages.

The Parkway autotransformers are adequate to supply the load forecast within the timeframe of this Outlook. Under certain conditions their spare capability may be useful to provide temporary relief of the Claireville or Cherrywood autotransformers.

Power advisories for the GTA may be issued following outages of more than two Pickering units and a single autotransformer in the GTA. Supplementary contingencies or 500 kV line outages may require load reduction measures ranging from voltage reduction to load curtailment, to control equipment loadings or system voltages in the GTA.

The supply to central Toronto will be improved during the period of this Outlook. The John TS to Esplanade TS link by Hydro One, which provides an additional 90 MW of load transfer capability from Leaside to the Manby West, was completed in December 2007 ahead of schedule. In addition, the completion of the Portland Energy Centre phase 1, currently scheduled to go in service before this summer, and phase 2, currently scheduled to go in service in spring 2009 will assist in eliminating possible overloads of the Manby TS and Leaside TS autotransformers.

The shunt capacitor at Richview TS which suffered significant damage at the beginning of 2007, as reported in the previous Outlook Report has returned to service at full capacity.

The IESO expects to be able to supply the extreme weather forecast GTA demand assuming that the availability of Pickering generation will be comparable to summer 2005 and 2006 and higher than summer 2007. Nevertheless, under certain demand or outage conditions, the portion of the grid supplying the GTA may still be stressed.

The GTA West transmission corridor between Trafalgar and Richview which supplies Brampton, Mississauga and parts of Caledon and Halton Hills may become loaded above capability during summer 2009 under extreme weather conditions. Transmission reinforcements which will relieve

the loading of this corridor and alleviate this problem are planned for in service before summer 2010.

In the York Region, the transformer station capacity in the Newmarket and Aurora area has been exceeded due to the rapidly growing loads. There is an immediate need for a new transformer station in the area. A new transformer station is planned to be in service before the end of 2009. Until then, the immediate needs will be addressed by load transfers, increasing the equipment operating ratings, by incentives for demand response programs in the area.

6.4.2 Bruce and Southwest Zones

Planned refurbishments at the Bruce nuclear station and proposed wind farm developments in southwestern Ontario will result in increased generation capacity from that region. To avoid the potential bottling of this generation a number of transmission enhancements are planned for the near term and the long term. Reinforcements that will increase the transfer capability out of Bruce in the near term include the up-rating of the Hanover to Orangeville 230 kV circuits and the installation of additional shunt capacitor facilities at Buchanan, Middleport and Nanticoke. These projects are of a high priority and are staged for completion between May to October 2009. Some bottling of Bruce area or west of London area generation may occur between the times when the seventh Bruce unit is returned to service until all shunt capacitors are placed in service. Additional facilities are likely required shortly after the 18 months study period to address this issue.

In addition to the near-term reinforcements described above, interim measures are being planned for the period before the new 500 kV line between Bruce to Milton is placed in service. The interim measures include additional voltage control facilities which together with the shunt capacitors and deployment of existing special protection systems will reduce potential generation bottling. In the longer-term, the new 500 kV double-circuit line from Bruce to Milton will provide the required transmission capability to deliver the full benefits of the Bruce refurbishment project and the development of new renewable resources in the area.

The new manufacturing development in the Woodstock area will result in increased stresses on the transmission system and low voltages in the area during extreme weather conditions. To alleviate these concerns Hydro One is planning to add a second supply point to the area by extending the 230 kV transmission lines from Ingersoll to Woodstock area, installing a new transformer station and installing additional low voltage shunt capacitors. This plan will provide an increased level of supply reliability, and support further load growth in the area.

Multiple long term outages associated with transmission equipment at Detweiler and Middleport are scheduled during the second and third quarter of 2008 and will result in a reduction in Flow Away from Bruce Complex (FABC) of up to 400 MW.

Limitations associated with the Burlington TS, previously identified by the IESO, are to be resolved partly before summer 2008 and completely by the end of 2010. This work which includes one transformer upgrade and the replacement of other limiting components will alleviate concerns related to the ability of the transmission system to supply the Burlington area loads.

6.4.3 Niagara Zone and the New York Interconnection

The situation with the Queenston Flow West project has not changed since the last Outlook. The completion date for transmission reinforcement between Niagara region into the Hamilton-Burlington area continues to be delayed. The limitations affect the use of both the available Ontario generation and imports into the province, particularly during hot weather, high demand periods.

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

A forced outage associated with one of Ontario to New York interconnection circuits at Niagara which is expected to last for most of this year, results in a reduction in import and export capability of 500 MW and 600 MW respectively. Other planned outages to these interconnection circuits that are currently scheduled during April 2008, will reduce the import and export capability of the Ontario-New York interconnection at Niagara even further. The outages are required by the New York Power Authority (NYPA) to allow dam inspection at their Lewiston facilities. An examination of the planned Ontario resources for this period revealed several weekly periods when major Ontario generators are also scheduled for outage. The resource adequacy assessment results show that under the Planned Resource Scenario and normal weather conditions the Reserve above Requirement levels are positive. This indicates that Ontario may not need to rely on imports to supply the forecast demand for this period and the reduced import capability is not a concern. However, for the extreme weather scenario the Reserve above Requirement levels are negative and the system reliability could be affected due to the combined effect of interconnection and generation outages. The IESO will be monitoring the situation closely and will take any necessary mitigating action.

6.4.4 East Zone and Ottawa Zone

The 1,250 MW interconnection between Hawthorne TS in Ontario and Outaouais station in Québec is scheduled for completion by March 31, 2009. The construction of the 230 kV double circuit line from Hawthorne to the border is underway and planned for completion by November 2008. The new interconnection will be accompanied by a new Special Protection System (SPS) to be installed at Hawthorne TS and modifications of the existing St. Lawrence TS SPS. The new SPS will maximize simultaneous imports from Québec and New York while maintaining the functionality of the existing St. Lawrence SPS.

The new Reliability Must Run (RMR) contract with OPG for Lennox GS that covers the period October 2007 to September 2008 was approved by the OEB in December. Studies performed by the IESO indicate that there could be significant adverse local area reliability impacts if Lennox is removed from the IESO-controlled grid and the IESO-administered markets without adequate replacement.

Lennox GS is presently needed to maintain local area reliability in the Ottawa area and the area of Ontario that is located east of the Flow East Toward Toronto (FETT) interface. When the new interconnection with Québec is completed, the resulting transmission improvements in the Ottawa area may reduce reliance on Lennox for the local Ottawa area need. Similarly, supply improvements from new generation and conservation in and around Toronto through 2010 are

expected to reduce the need for Lennox to control flows on the FETT interface. However, Lennox GS is also critical to provincial resource adequacy, and must be retained or replaced. This resource adequacy requirement cannot be achieved through an RMR under the current Market Rules. The Integrated Power System Plan filed by the OPA with the OEB in August assumes that Lennox remains in service and is categorized as a planned gas resource starting in 2011. The IESO will continue to negotiate RMR contracts for Lennox GS within the existing market rule structure, as necessary, until the local area requirements are met.

6.4.5 West Zone and the Michigan Interconnection

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

The multiple outages related to Lambton and Sarnia-Scott station reconfigurations and refurbishments, Longwood station equipment refurbishments and other line work scheduled throughout 2008 will result in reductions in the FABC limit, the Buchanan Longwood Input (BLIP) limit and the Negative Buchanan Longwood Input (NBLIP) limit as well as a reduction of the import and export capability of the Ontario - Michigan interconnection. Outages that coincide with the 2008 summer peak period could reduce the FABC limit by up to 400 MW, and the BLIP/NBLIP limit by up to 500 MW. Outages that coincide with the 2008-2009 winter period could also reduce the FABC limit by up to 150 MW, the BLIP/NBLIP limit by up to 500 MW. Most of these outages are not recallable.

An assessment of the scheduled generation outages in conjunction with the transmission outages and in conjunction with the projected capability of the transmission interfaces and the inter-ties shows that the transmission system will be adequate to supply the normal weather load forecast for the Outlook period but the supply situation appears to be tight during the first two weeks of September 2008 under extreme weather conditions.

Hydro One plans to enhance the transmission system in the Windsor area to address voltage and overload concerns and increase the transmission capability to supply the area load. The enhancements include a new 230 kV power supply point to Kingsville TS, upgrading 115 kV transmission circuits in the Windsor area the replacement of Keith TS autotransformers. As a secondary benefit, these upgrades will also alleviate the transmission limitations internal to Ontario which could, under specific generation dispatch scenarios, limit the Michigan import capability.

Phase angle regulators (PARs) are installed on the Michigan - Ontario interconnection at Lambton TS and Scott TS but are not available to regulate flows except in emergencies. The IESO, the Midwest ISO, Hydro One and International Transmission Company, agreed to temporarily bypass those phase angle regulators for normal operation until an agreement is reached to make full use of their regulating capability. The PAR controlling the tie flow on 230 kV circuit B3N, which is located in Michigan at the Bunce Creek terminal, is also unavailable and undergoing replacement.

Hydro One and the International Transmission Company signed a facility agreement on the Michigan-Ontario interconnection phase angle regulators. Operating agreements and instructions are currently being negotiated between the IESO and Hydro One, and the IESO and the Mid-west ISO. The available phase angle regulators are expected to become operational in the second quarter of 2008. The operation of the phase angle regulators will control circulating flows and assist in management of system congestion.

6.4.6 Northern Ontario

The transmission corridor east of Mississagi has been experiencing increased congestion due to the connection of the 200 MW Prince Park Wind Farm and the unbottling of Brookfield generation following the completion of the Great Lakes Power (GLP) 230 kV transmission reinforcement between Wawa TS and Third Line TS. It is expected that congestion will increase even further when the recently contracted Algoma Energy co-generation project is complete in mid 2009.

For the near-term, the IESO has recommended that the existing Mississagi TS and Algoma TS generation rejection schemes be enhanced as soon as possible to unbottle the generation west of Mississagi and eliminate the congestion over this transmission interface. Hydro One is planning to implement the required modifications before the end of 2008.

Extensive line work that's scheduled to begin early 2008 and last for most of the year is required to replace tower structures of the 230 kV circuits in the Kenora area. This series of outages can reduce the Ontario – Manitoba interface transfer capacity by up to 250 MW and result in a reduction of the North West - North East interface capability by up to 200 MW at times.

To resolve customer power quality supply issues Hydro One has decided to contract with OPG the return to service of the Thunder Bay C1. The condenser is scheduled to return to service by the summer of 2008.

6.4.7 Ontario 25 Hz System

The gradual retirement of the Niagara 25 Hz system is well underway. As mentioned in previous Outlooks, the IESO advised the 25 Hz customers in 2005 that the 25 Hz supply would be retired in April 2009, and in January 2007 National Grid, a transmission entity in the United States, informed the IESO that it had retired the US portion of the Niagara 25 Hz system. These activities pave the way for the retirement of the supporting transmission and generation facilities at the Sir Adam Beck 1 Generating Station. The IESO has approved the decertification request for the 25 Hz Niagara frequency changer and the remaining 25 Hz generation units at Beck No.1 effective April 30, 2009.

In Northeastern Ontario most of the 25 Hz generation facilities are scheduled to be retired in the first half of 2009 and Ontario Power Generation is planning to commence the replacement of these generating facilities with 60 Hz facilities shortly after. There is no longer any 25 Hz load in Northern Ontario.

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7.0 Conclusions

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

Resource Adequacy

- Under the Planned Resource-Normal Weather Scenario, forecast reserves within Ontario are sufficient to meet requirements for all weeks in the study period. Opportunities will exist for additional planned generator maintenance and exports in most of the weeks of the Outlook period. It is expected that generator owners will consider any future outages only when reserve levels are larger than the generator capacity being considered for outage.
- Under the Firm Resource-Normal Weather Scenario, the reserves are forecast to be below requirements for 19 of 78 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 the IESO to reject planned outages and use emergency operating procedures.
- Results of the resource adequacy assessment are summarized in the matrix below. The different shadings are intended to suggest the degree of concern regarding the supply/demand situation under each resource-weather scenario combination.

	Normal Weather Scenario	Extreme Weather Scenario
Planned Resource Scenario	- there is no week when reserves are lower than required - opportunities for additional outages/exports exist in most of the weeks	- many planned outages at risk - imports required during some peak periods - higher risk of requiring emergency operating procedures
Firm Resource Scenario	- there are 19 weeks when reserves are lower than required (planned outages at risk or imports potentially required) - opportunities for additional outages/exports exist in many other weeks	- many planned outages at risk - imports required during some peak periods - higher risk of requiring emergency operating procedures

- For the Normal Weather Planned Resource Scenario to exhibit positive supply margins in all weeks covered by this Outlook, all of the planned resource additions must meet their stated in service targets and the conservation targets set by the Ontario Power Authority (OPA) must be achieved.
- Even if that does occur, Ontario may need to rely on imports from neighbouring jurisdictions to maintain reliability if extreme weather occurs or if equipment performance is below normal.

- A number of large generating units are scheduled to return to service from outage prior to the summers of 2008 and 2009. Meeting these planned outage schedules is critical to maintaining adequate reserve levels over the peak season.
- Reserves are higher than required during the winter under the Normal Weather, Planned Resource Scenario allowing opportunities for additional generator outages in these periods. Air conditioning load growth, combined with minimal growth in heating load has led to the transition from winter peaking to summer peaking over the last ten years. This gap continues to grow. The development of new capabilities and resources to meet the higher summer peaks increases the capability to accommodate planned generator maintenance over the winter months.
- 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.
- The IESO is examining options to mitigate the impacts from surplus supply scenarios, which could include improving the advance knowledge of such potential conditions to better facilitate coordination efforts and market responses.
- Lennox GS is presently needed to maintain local area reliability in the Ottawa area and the area of Ontario that is located east of the Flow East Toward Toronto (FETT) interface. When the new interconnection with Québec is completed, the resulting transmission improvements in the Ottawa area may reduce reliance on Lennox for the local Ottawa area need. Similarly, supply improvements from new generation and conservation in and around Toronto through 2010 are expected to reduce the need for Lennox to control flows on the FETT interface. However, Lennox GS is also critical to provincial resource adequacy, and must be retained or replaced. This resource adequacy requirement cannot be achieved through an RMR under the current Market Rules. The Integrated Power System Plan filed by the OPA with the OEB in August assumes that Lennox remains in service and is categorized as a planned gas resource starting in 2011. The IESO will continue to negotiate RMR contracts for Lennox GS within the existing market rule structure, as necessary, until the local area requirements are met.
- 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.

Transmission Adequacy

- The Ontario transmission system is expected to be adequate to supply the 2008 and 2009 demand under normal weather load, but Ontario may be faced with a tight supply situation during the first two weeks of September 2008 if extreme weather conditions occur under the assumed generation and transmission outage schedule.
- The supply to central Toronto will be improved during the period of this Outlook with the scheduled completion of Portlands generation and the presence of the John to Esplanade link which was completed in December 2007.

- The IESO expects to be able to supply the extreme weather forecast GTA demand assuming all autotransformers at Trafalgar, Claireville, Parkway and Cherrywood and a minimum of four Pickering units are available. To minimize the risks to the GTA as the summer of 2008 approaches, the IESO will continue to monitor three key aspects:
 - availability and general condition of the 12 autotransformers feeding the GTA from Claireville, Trafalgar Parkway and Cherrywood TS,
 - availability of no less than four Pickering units during the summer months, and
 - progress of Portlands Phase 1, expected in service just prior to summer 2008
- Five new and upgraded load supply transformer stations will be placed in service during the timeframe of this Outlook and shortly after to help relieve loadings of exiting transformer stations and provide additional transformer capacity for future load growth.
- Particular areas of concern include Brampton, Northern Mississauga and Northern York.
- A number of transmission reinforcements required to ensure adequate supply to meet the Ontario electricity demand in the near future are currently under construction and planned to be in service during the study period of this Outlook.
- The 1,250 MW interconnection between Hawthorne TS in Ontario and Outaouais station in Québec is scheduled for completion by March 31, 2009. The construction of the 230 kV double circuit line from Hawthorne to the border is planned for completion by November 2008.
- The multiple outages related to Lambton and Sarnia-Scott station reconfigurations and refurbishments, Longwood station equipment refurbishments and other lines work scheduled during 2008 will result in a reduction in FABC limit, BLIP limit and NBLIP limit as well as a reduction of the import and export capability of the Ontario - Michigan interconnection. Outside of the first two weeks of September 2008, concerns were not identified with respect to the adequacy of the transmission system to supply the load or to the reduced capability of the Michigan to Ontario interconnection for the period of these outages.
- Hydro One and the International Transmission Company signed a facility agreement on the Michigan-Ontario interconnection phase angle regulators. The phase angle regulators are expected to become operational in the second quarter of 2008.
- Hydro One will enhance the existing Mississagi TS and Algoma TS generation rejection schemes by the end of 2008 to unbundle the generation west of Mississagi and eliminate the congestion over the transmission corridor East of Mississagi.
- The retirement of the Niagara 25 Hz system and the deregistration of all the Northeast 25 Hz generation stations except one, will be completed during the period covered in this Outlook report.

- End of Section -

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Appendix A Resource Adequacy Assessment Details

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

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
06-Apr-08	31,299	7,858	298	23,740	23,319	15.2	3,136	13.2	2,715	421
13-Apr-08	31,299	7,321	298	24,277	22,534	23.1	4,558	14.3	2,815	1,743
20-Apr-08	31,299	7,107	298	24,491	22,546	24.3	4,783	14.4	2,838	1,945
27-Apr-08	31,299	7,300	298	24,298	21,786	26.6	5,108	13.5	2,596	2,512
04-May-08	31,311	6,835	298	24,774	22,139	28.8	5,533	15.1	2,898	2,635
11-May-08	31,311	7,743	298	23,866	22,326	21.0	4,149	13.2	2,609	1,540
18-May-08	31,311	6,663	298	24,946	22,787	24.5	4,907	13.7	2,748	2,159
25-May-08	31,311	6,586	298	25,023	23,422	22.6	4,620	14.8	3,019	1,601
01-Jun-08	31,311	5,926	298	25,683	24,060	24.0	4,972	16.2	3,349	1,623
08-Jun-08	31,578	6,718	298	25,158	24,861	16.7	3,605	15.4	3,308	297
15-Jun-08	31,578	5,752	298	26,124	27,188	10.9	2,573	15.4	3,637	-1,064
22-Jun-08	31,578	4,464	298	27,412	28,518	11.6	2,857	16.1	3,963	-1,106
29-Jun-08	31,578	4,445	298	27,431	28,100	14.1	3,389	16.9	4,058	-669
06-Jul-08	31,601	3,650	298	28,249	27,340	17.9	4,281	14.1	3,372	909
13-Jul-08	31,601	3,661	298	28,238	28,614	13.2	3,293	14.7	3,669	-376
20-Jul-08	31,601	3,600	298	28,299	29,528	11.0	2,806	15.8	4,035	-1,229
27-Jul-08	31,601	3,646	298	28,253	28,138	14.6	3,596	14.1	3,481	115
03-Aug-08	31,601	3,812	298	28,087	27,050	18.5	4,392	14.2	3,355	1,037
10-Aug-08	31,601	3,881	298	28,018	28,357	13.4	3,304	14.7	3,643	-339
17-Aug-08	31,601	3,817	298	28,082	27,939	15.0	3,664	14.4	3,521	143
24-Aug-08	31,601	3,891	298	28,008	26,828	19.4	4,540	14.3	3,360	1,180
31-Aug-08	31,601	5,036	298	26,863	27,179	12.1	2,909	13.5	3,225	-316
07-Sep-08	31,601	6,423	298	25,476	26,188	13.1	2,942	16.2	3,654	-712
14-Sep-08	31,601	6,485	298	25,414	25,331	17.3	3,746	16.9	3,663	83
21-Sep-08	31,601	7,397	298	24,502	24,188	18.0	3,734	16.5	3,420	314
28-Sep-08	31,601	7,757	298	24,142	22,673	19.5	3,939	12.2	2,470	1,469
05-Oct-08	31,601	7,422	298	24,477	22,015	26.3	5,090	13.6	2,628	2,462
12-Oct-08	31,601	7,169	298	24,730	22,216	26.0	5,102	13.2	2,588	2,514
19-Oct-08	31,601	7,619	298	24,280	22,571	21.2	4,241	12.6	2,532	1,709
26-Oct-08	31,601	7,636	298	24,263	23,136	18.4	3,764	12.9	2,637	1,127
02-Nov-08	31,601	8,408	298	23,491	24,069	10.8	2,290	13.5	2,868	-578
09-Nov-08	31,628	7,315	298	24,611	24,131	14.8	3,174	12.6	2,694	480
16-Nov-08	31,628	7,705	298	24,221	24,708	10.1	2,223	12.3	2,710	-487
23-Nov-08	31,628	5,973	298	25,953	25,261	15.8	3,539	12.7	2,847	692
30-Nov-08	31,628	5,948	298	25,978	25,256	15.8	3,546	12.6	2,824	722
07-Dec-08	31,628	5,322	298	26,604	26,292	14.0	3,256	12.6	2,944	312
14-Dec-08	31,628	3,833	298	28,093	26,470	19.4	4,571	12.5	2,948	1,623
21-Dec-08	31,628	3,288	298	28,638	26,402	22.8	5,309	13.2	3,073	2,236
28-Dec-08	31,628	2,857	298	29,069	25,903	27.6	6,279	13.7	3,113	3,166

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

(Table A1 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
04-Jan-09	31,628	2,861	298	29,065	24,821	33.3	7,261	13.8	3,017	4,244
11-Jan-09	31,628	2,771	298	29,155	26,976	21.8	5,214	12.7	3,035	2,179
18-Jan-09	31,628	2,782	298	29,144	27,397	19.8	4,809	12.6	3,062	1,747
25-Jan-09	31,628	2,771	298	29,155	27,155	20.9	5,041	12.6	3,041	2,000
01-Feb-09	31,628	2,771	298	29,155	26,803	22.6	5,372	12.7	3,020	2,352
08-Feb-09	31,623	2,813	298	29,108	26,894	21.9	5,223	12.6	3,009	2,214
15-Feb-09	31,623	2,961	298	28,960	26,558	23.0	5,421	12.8	3,019	2,402
22-Feb-09	31,623	2,961	298	28,960	26,354	23.9	5,584	12.7	2,978	2,606
01-Mar-09	31,623	3,466	298	28,455	25,978	24.4	5,573	13.5	3,096	2,477
08-Mar-09	31,623	4,576	298	27,345	25,662	22.0	4,932	14.5	3,249	1,683
15-Mar-09	31,623	6,369	298	25,552	24,621	16.6	3,640	12.4	2,709	931
22-Mar-09	31,623	6,647	298	25,274	24,333	17.3	3,726	12.9	2,785	941
29-Mar-09	31,623	6,690	298	25,231	23,610	20.7	4,332	13.0	2,711	1,621
05-Apr-09	31,682	6,990	298	24,990	23,584	20.6	4,268	13.8	2,862	1,406
12-Apr-09	31,682	6,884	298	25,096	22,698	26.7	5,289	14.6	2,891	2,398
19-Apr-09	31,682	7,006	298	24,974	22,665	26.0	5,154	14.4	2,845	2,309
26-Apr-09	31,682	9,457	298	22,523	22,181	16.7	3,228	15.0	2,886	342
03-May-09	31,682	9,455	298	22,525	22,322	16.4	3,179	15.4	2,976	203
10-May-09	31,632	9,633	298	22,297	22,611	11.9	2,376	13.5	2,690	-314
17-May-09	31,632	9,704	298	22,226	23,016	9.9	1,999	13.8	2,789	-790
24-May-09	31,632	8,651	298	23,279	23,765	13.1	2,689	15.4	3,175	-486
31-May-09	31,632	7,020	298	24,910	24,155	19.2	4,005	15.6	3,250	755
07-Jun-09	31,632	6,743	298	25,187	24,610	17.6	3,770	14.9	3,193	577
14-Jun-09	31,632	5,738	298	26,192	27,345	10.3	2,448	15.2	3,601	-1,153
21-Jun-09	31,632	4,899	298	27,031	28,624	9.4	2,319	15.8	3,912	-1,593
28-Jun-09	31,632	4,468	298	27,462	28,216	13.4	3,235	16.5	3,989	-754
05-Jul-09	31,632	4,533	298	27,397	26,645	17.5	4,085	14.3	3,333	752
12-Jul-09	31,632	4,508	298	27,422	28,877	8.9	2,250	14.7	3,705	-1,455
19-Jul-09	31,632	3,620	298	28,310	29,657	10.2	2,626	15.5	3,973	-1,347
26-Jul-09	31,632	3,629	298	28,301	28,257	13.9	3,461	13.8	3,417	44
02-Aug-09	31,632	3,623	298	28,307	27,116	18.6	4,447	13.7	3,256	1,191
09-Aug-09	31,632	3,831	298	28,099	28,452	12.9	3,212	14.3	3,565	-353
16-Aug-09	31,632	3,843	298	28,087	28,037	14.3	3,503	14.1	3,453	50
23-Aug-09	31,632	3,842	298	28,088	26,893	18.9	4,455	13.8	3,260	1,195
30-Aug-09	31,632	3,841	298	28,089	27,305	16.5	3,970	13.2	3,186	784
06-Sep-09	31,632	4,552	298	27,378	26,554	20.5	4,654	16.9	3,830	824
13-Sep-09	31,632	5,707	298	26,223	25,466	20.0	4,363	16.5	3,606	757
20-Sep-09	31,632	6,715	298	25,215	24,330	20.3	4,258	16.1	3,373	885
27-Sep-09	31,632	7,272	298	24,658	22,845	21.0	4,276	12.1	2,463	1,813

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

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
06-Apr-08	31,299	7,872	411	23,839	22,705	18.9	3,791	13.3	2,657	1,134
13-Apr-08	31,299	7,334	411	24,377	21,972	27.2	5,208	14.6	2,803	2,405
20-Apr-08	31,299	7,121	411	24,590	21,975	28.4	5,443	14.8	2,828	2,615
27-Apr-08	31,299	7,261	411	24,450	21,242	31.1	5,795	13.9	2,587	3,208
04-May-08	31,311	6,821	411	24,901	21,619	32.9	6,169	15.4	2,887	3,282
11-May-08	31,311	7,729	411	23,993	21,863	24.6	4,739	13.6	2,609	2,130
18-May-08	31,311	6,696	411	25,026	22,328	27.8	5,446	14.0	2,748	2,698
25-May-08	31,311	6,588	411	25,134	22,958	26.0	5,184	15.1	3,008	2,176
01-Jun-08	31,311	5,926	411	25,796	23,535	27.6	5,585	16.5	3,324	2,261
08-Jun-08	31,578	6,437	541	25,682	24,321	22.1	4,652	15.7	3,291	1,361
15-Jun-08	31,578	5,471	541	26,648	26,530	15.8	3,642	15.3	3,524	118
22-Jun-08	31,578	4,196	541	27,923	27,711	16.9	4,031	16.0	3,819	212
29-Jun-08	31,578	4,179	541	27,940	27,431	18.9	4,447	16.8	3,938	509
06-Jul-08	31,601	3,383	541	28,759	26,790	22.9	5,367	14.5	3,398	1,969
13-Jul-08	31,601	3,395	541	28,747	27,832	18.3	4,455	14.6	3,540	915
20-Jul-08	31,601	3,333	541	28,809	28,799	15.7	3,917	15.7	3,907	10
27-Jul-08	31,601	3,379	541	28,763	27,454	19.7	4,724	14.2	3,415	1,309
03-Aug-08	31,601	3,545	541	28,597	26,488	23.8	5,490	14.6	3,381	2,109
10-Aug-08	31,601	3,614	541	28,528	27,702	18.0	4,353	14.6	3,527	826
17-Aug-08	31,601	3,549	541	28,593	27,305	19.9	4,746	14.5	3,458	1,288
24-Aug-08	31,601	3,624	541	28,518	26,294	24.5	5,610	14.8	3,386	2,224
31-Aug-08	31,601	4,769	541	27,373	26,486	17.1	3,991	13.3	3,104	887
07-Sep-08	31,613	6,169	541	25,986	25,606	18.0	3,958	16.2	3,578	380
14-Sep-08	31,613	6,231	541	25,924	24,805	22.6	4,785	17.3	3,666	1,119
21-Sep-08	31,613	7,143	541	25,012	23,617	23.9	4,818	17.0	3,423	1,395
28-Sep-08	31,613	7,503	541	24,652	22,211	25.1	4,951	12.7	2,510	2,441
05-Oct-08	32,618	7,464	541	25,696	21,700	36.0	6,795	14.8	2,799	3,996
12-Oct-08	32,618	7,165	541	25,995	21,932	35.6	6,825	14.4	2,762	4,063
19-Oct-08	32,618	7,615	541	25,545	22,274	30.5	5,976	13.8	2,705	3,271
26-Oct-08	32,618	7,633	541	25,527	22,833	27.5	5,498	14.0	2,804	2,694
02-Nov-08	32,917	8,704	541	24,755	23,486	19.7	4,069	13.5	2,800	1,269
09-Nov-08	32,944	7,582	541	25,904	23,630	24.2	5,044	13.3	2,770	2,274
16-Nov-08	32,944	7,972	541	25,514	24,039	19.0	4,075	12.1	2,600	1,475
23-Nov-08	32,944	6,216	541	27,270	24,814	24.7	5,402	13.5	2,946	2,456
30-Nov-08	32,944	6,214	541	27,272	24,767	24.8	5,427	13.4	2,922	2,505
07-Dec-08	32,944	5,590	541	27,896	25,681	22.7	5,164	13.0	2,949	2,215
14-Dec-08	32,944	4,097	541	29,389	26,002	28.4	6,503	13.6	3,116	3,387
21-Dec-08	32,944	3,531	541	29,955	25,939	32.0	7,255	14.3	3,239	4,016
28-Dec-08	32,944	3,320	541	30,166	25,481	35.9	7,966	14.8	3,281	4,685

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

(Table A2 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
04-Jan-09	32,944	3,452	541	30,034	24,392	41.6	8,826	15.0	3,184	5,642
11-Jan-09	33,276	3,435	541	30,382	26,272	31.7	7,308	13.9	3,198	4,110
18-Jan-09	33,276	3,456	541	30,361	26,665	29.5	6,920	13.8	3,224	3,696
25-Jan-09	33,276	3,375	541	30,442	26,411	31.2	7,235	13.8	3,204	4,031
01-Feb-09	33,276	3,450	541	30,367	26,057	32.8	7,493	13.9	3,183	4,310
08-Feb-09	33,271	3,449	541	30,363	26,183	32.0	7,354	13.8	3,174	4,180
15-Feb-09	33,271	3,721	541	30,091	25,848	32.8	7,426	14.0	3,183	4,243
22-Feb-09	33,271	3,637	541	30,175	25,658	34.0	7,662	14.0	3,145	4,517
01-Mar-09	33,271	4,005	541	29,807	25,256	35.5	7,813	14.8	3,262	4,551
08-Mar-09	33,841	5,419	541	28,963	25,016	34.5	7,422	16.1	3,475	3,947
15-Mar-09	33,841	7,347	541	27,035	23,989	28.4	5,980	13.9	2,934	3,046
22-Mar-09	33,841	7,636	541	26,746	23,731	29.2	6,044	14.6	3,029	3,015
29-Mar-09	33,841	7,659	541	26,723	23,030	33.2	6,667	14.8	2,974	3,693
05-Apr-09	34,756	7,914	541	27,384	23,035	37.7	7,499	15.8	3,150	4,349
12-Apr-09	34,756	7,865	541	27,433	22,198	44.2	8,412	16.7	3,177	5,235
19-Apr-09	34,756	8,059	541	27,239	22,183	43.0	8,193	16.5	3,137	5,056
26-Apr-09	34,756	10,520	541	24,778	21,662	33.9	6,274	17.1	3,158	3,116
03-May-09	34,756	10,582	541	24,716	21,800	33.1	6,149	17.4	3,233	2,916
10-May-09	34,706	10,738	541	24,510	22,059	27.3	5,260	14.6	2,809	2,451
17-May-09	34,706	10,870	541	24,378	22,394	24.8	4,837	14.6	2,853	1,984
24-May-09	34,706	10,271	541	24,977	23,240	25.3	5,047	16.6	3,310	1,737
31-May-09	34,706	8,126	541	27,122	23,754	34.0	6,879	17.3	3,511	3,368
07-Jun-09	35,891	7,497	541	28,936	24,280	39.8	8,237	17.3	3,581	4,656
14-Jun-09	35,891	6,281	541	30,152	26,722	31.2	7,162	16.2	3,732	3,430
21-Jun-09	35,891	5,537	541	30,896	27,951	29.1	6,962	16.8	4,017	2,945
28-Jun-09	35,891	5,706	541	30,727	27,528	31.9	7,428	18.2	4,229	3,199
05-Jul-09	35,891	5,638	541	30,795	26,196	37.1	8,336	16.6	3,737	4,599
12-Jul-09	35,891	5,534	541	30,899	28,156	26.9	6,545	15.6	3,802	2,743
19-Jul-09	35,891	4,538	541	31,895	28,848	28.9	7,141	16.5	4,094	3,047
26-Jul-09	35,891	4,607	541	31,826	27,688	32.7	7,841	15.4	3,703	4,138
02-Aug-09	35,891	4,767	541	31,666	26,660	37.7	8,675	16.0	3,669	5,006
09-Aug-09	35,891	4,814	541	31,619	27,847	31.5	7,571	15.8	3,799	3,772
16-Aug-09	35,891	4,824	541	31,609	27,556	32.8	7,798	15.7	3,745	4,053
23-Aug-09	35,891	4,874	541	31,559	26,493	38.3	8,739	16.1	3,673	5,066
30-Aug-09	35,891	4,854	541	31,579	26,900	35.4	8,256	15.3	3,577	4,679
06-Sep-09	35,891	5,739	541	30,694	26,108	40.1	8,782	19.2	4,196	4,586
13-Sep-09	35,891	6,427	541	30,006	25,108	42.0	8,878	18.8	3,980	4,898
20-Sep-09	35,891	7,456	541	28,977	23,944	43.5	8,780	18.6	3,747	5,033
27-Sep-09	35,891	8,056	541	28,377	22,520	44.7	8,771	14.9	2,914	5,857

Table A3 Demand Forecast Range for Firm Resource Scenario

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
06-Apr-08	20,604	22,276	04-Jan-09	21,804	23,110
13-Apr-08	19,719	20,903	11-Jan-09	23,941	24,938
20-Apr-08	19,708	22,161	18-Jan-09	24,335	25,400
27-Apr-08	19,190	22,153	25-Jan-09	24,114	25,290
04-May-08	19,241	21,850	01-Feb-09	23,783	24,931
11-May-08	19,717	22,438	08-Feb-09	23,885	25,011
18-May-08	20,039	21,883	15-Feb-09	23,539	24,584
25-May-08	20,403	22,769	22-Feb-09	23,376	24,296
01-Jun-08	20,711	23,898	01-Mar-09	22,882	24,134
08-Jun-08	21,553	24,438	08-Mar-09	22,413	23,941
15-Jun-08	23,551	25,890	15-Mar-09	21,912	23,262
22-Jun-08	24,555	27,015	22-Mar-09	21,548	22,792
29-Jun-08	24,042	26,648	29-Mar-09	20,899	22,173
06-Jul-08	23,968	25,685	05-Apr-09	20,722	22,429
13-Jul-08	24,945	26,763	12-Apr-09	19,807	20,991
20-Jul-08	25,493	27,748	19-Apr-09	19,820	22,342
27-Jul-08	24,657	26,630	26-Apr-09	19,295	22,356
03-Aug-08	23,695	25,388	03-May-09	19,346	22,047
10-Aug-08	24,714	27,661	10-May-09	19,921	22,634
17-Aug-08	24,418	26,833	17-May-09	20,227	22,064
24-Aug-08	23,468	26,091	24-May-09	20,590	22,957
31-Aug-08	23,954	26,184	31-May-09	20,905	24,079
07-Sep-08	22,534	26,012	07-Jun-09	21,417	24,555
14-Sep-08	21,668	25,777	14-Jun-09	23,744	26,083
21-Sep-08	20,768	24,867	21-Jun-09	24,712	27,171
28-Sep-08	20,203	23,299	28-Jun-09	24,227	26,833
05-Oct-08	19,387	22,678	05-Jul-09	23,312	25,388
12-Oct-08	19,628	20,293	12-Jul-09	25,172	26,989
19-Oct-08	20,039	20,962	19-Jul-09	25,684	27,939
26-Oct-08	20,499	21,258	26-Jul-09	24,840	26,813
02-Nov-08	21,201	21,890	02-Aug-09	23,860	25,553
09-Nov-08	21,437	22,237	09-Aug-09	24,887	27,834
16-Nov-08	21,998	22,932	16-Aug-09	24,584	26,999
23-Nov-08	22,414	23,429	23-Aug-09	23,633	26,256
30-Nov-08	22,432	23,917	30-Aug-09	24,119	26,350
07-Dec-08	23,348	24,602	06-Sep-09	22,724	26,262
14-Dec-08	23,522	24,632	13-Sep-09	21,860	25,907
21-Dec-08	23,329	24,637	20-Sep-09	20,957	25,058
28-Dec-08	22,790	24,056	27-Sep-09	20,382	23,478

Table A4 Demand Forecast Range for Planned Resource Scenario

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
06-Apr-08	20,048	21,720	04-Jan-09	21,208	22,514
13-Apr-08	19,169	20,352	11-Jan-09	23,074	24,071
20-Apr-08	19,147	21,600	18-Jan-09	23,441	24,507
27-Apr-08	18,655	21,618	25-Jan-09	23,207	24,383
04-May-08	18,732	21,341	01-Feb-09	22,874	24,021
11-May-08	19,254	21,975	08-Feb-09	23,009	24,135
18-May-08	19,580	21,423	15-Feb-09	22,665	23,710
25-May-08	19,950	22,317	22-Feb-09	22,513	23,432
01-Jun-08	20,211	23,398	01-Mar-09	21,994	23,246
08-Jun-08	21,030	23,914	08-Mar-09	21,541	23,069
15-Jun-08	23,006	25,345	15-Mar-09	21,055	22,405
22-Jun-08	23,892	26,352	22-Mar-09	20,702	21,947
29-Jun-08	23,493	26,099	29-Mar-09	20,056	21,330
06-Jul-08	23,392	25,110	05-Apr-09	19,885	21,592
13-Jul-08	24,292	26,110	12-Apr-09	19,021	20,206
20-Jul-08	24,892	27,147	19-Apr-09	19,046	21,568
27-Jul-08	24,039	26,013	26-Apr-09	18,504	21,564
03-Aug-08	23,107	24,800	03-May-09	18,567	21,268
10-Aug-08	24,175	27,122	10-May-09	19,250	21,963
17-Aug-08	23,847	26,262	17-May-09	19,541	21,379
24-Aug-08	22,908	25,531	24-May-09	19,930	22,297
31-Aug-08	23,382	25,612	31-May-09	20,243	23,417
07-Sep-08	22,028	25,507	07-Jun-09	20,699	23,837
14-Sep-08	21,139	25,248	14-Jun-09	22,990	25,329
21-Sep-08	20,194	24,294	21-Jun-09	23,934	26,394
28-Sep-08	19,701	22,797	28-Jun-09	23,299	25,905
05-Oct-08	18,901	22,192	05-Jul-09	22,459	24,535
12-Oct-08	19,170	19,835	12-Jul-09	24,354	26,171
19-Oct-08	19,569	20,492	19-Jul-09	24,754	27,009
26-Oct-08	20,029	20,787	26-Jul-09	23,985	25,958
02-Nov-08	20,686	21,375	02-Aug-09	22,991	24,684
09-Nov-08	20,860	21,660	09-Aug-09	24,048	26,995
16-Nov-08	21,439	22,373	16-Aug-09	23,811	26,226
23-Nov-08	21,868	22,883	23-Aug-09	22,820	25,444
30-Nov-08	21,845	23,330	30-Aug-09	23,323	25,554
07-Dec-08	22,732	23,987	06-Sep-09	21,912	25,450
14-Dec-08	22,886	23,995	13-Sep-09	21,128	25,175
21-Dec-08	22,700	24,008	20-Sep-09	20,197	24,298
28-Dec-08	22,200	23,466	27-Sep-09	19,606	22,703

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

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
06-Apr-08	31,299	7,848	298	23,750	25,139	6.6	1,474	12.9	2,863	-1,389
13-Apr-08	31,299	7,300	298	24,298	23,482	16.2	3,395	12.3	2,579	816
20-Apr-08	31,299	7,102	298	24,496	25,024	10.5	2,335	12.9	2,863	-528
27-Apr-08	31,299	7,324	298	24,274	24,849	9.6	2,121	12.2	2,696	-575
04-May-08	31,311	6,835	298	24,774	24,656	13.4	2,924	12.8	2,806	118
11-May-08	31,311	7,743	298	23,866	25,448	6.4	1,428	13.4	3,010	-1,582
18-May-08	31,311	6,654	298	24,955	24,725	14.0	3,072	13.0	2,842	230
25-May-08	31,311	6,571	298	25,038	25,756	10.0	2,269	13.1	2,987	-718
01-Jun-08	31,311	5,899	298	25,710	26,975	7.6	1,812	12.9	3,077	-1,265
08-Jun-08	31,578	6,718	298	25,158	27,683	3.0	720	13.3	3,245	-2,525
15-Jun-08	31,578	5,752	298	26,124	29,415	0.9	234	13.6	3,525	-3,291
22-Jun-08	31,578	4,439	298	27,437	30,617	1.6	422	13.3	3,602	-3,180
29-Jun-08	31,578	4,389	298	27,487	30,207	3.2	839	13.4	3,559	-2,720
06-Jul-08	31,601	3,561	298	28,338	28,934	10.3	2,653	12.7	3,249	-596
13-Jul-08	31,601	3,645	298	28,254	30,241	5.6	1,491	13.0	3,478	-1,987
20-Jul-08	31,601	3,569	298	28,330	31,373	2.1	582	13.1	3,625	-3,043
27-Jul-08	31,601	3,641	298	28,258	30,090	6.1	1,628	13.0	3,460	-1,832
03-Aug-08	31,601	3,824	298	28,075	28,620	10.6	2,687	12.7	3,232	-545
10-Aug-08	31,601	3,895	298	28,004	31,309	1.2	343	13.2	3,648	-3,305
17-Aug-08	31,601	3,808	298	28,091	30,358	4.7	1,258	13.1	3,525	-2,267
24-Aug-08	31,601	3,907	298	27,992	29,461	7.3	1,901	12.9	3,370	-1,469
31-Aug-08	31,601	5,049	298	26,850	29,542	2.5	666	12.8	3,358	-2,692
07-Sep-08	31,601	6,212	298	25,687	29,373	-1.3	-325	12.9	3,361	-3,686
14-Sep-08	31,601	6,088	298	25,811	29,107	0.1	34	12.9	3,330	-3,296
21-Sep-08	31,601	7,360	298	24,539	28,077	-1.3	-328	12.9	3,210	-3,538
28-Sep-08	31,601	7,764	298	24,135	26,223	3.6	836	12.6	2,924	-2,088
05-Oct-08	31,601	7,426	298	24,473	25,567	7.9	1,795	12.7	2,889	-1,094
12-Oct-08	31,601	7,132	298	24,767	22,784	22.1	4,474	12.3	2,491	1,983
19-Oct-08	31,601	7,622	298	24,277	23,434	15.8	3,315	11.8	2,472	843
26-Oct-08	31,601	7,605	298	24,294	23,796	14.3	3,036	11.9	2,538	498
02-Nov-08	31,601	8,440	298	23,459	24,701	7.2	1,569	12.8	2,811	-1,242
09-Nov-08	31,628	7,368	298	24,558	24,970	10.4	2,321	12.3	2,733	-412
16-Nov-08	31,628	7,793	298	24,133	25,736	5.2	1,201	12.2	2,804	-1,603
23-Nov-08	31,628	6,061	298	25,865	26,299	10.4	2,436	12.3	2,870	-434
30-Nov-08	31,628	6,004	298	25,922	26,872	8.4	2,005	12.4	2,955	-950
07-Dec-08	31,628	5,368	298	26,558	27,624	8.0	1,956	12.3	3,022	-1,066
14-Dec-08	31,628	3,997	298	27,929	27,626	13.4	3,297	12.2	2,994	303
21-Dec-08	31,628	3,382	298	28,544	27,624	15.9	3,907	12.1	2,987	920
28-Dec-08	31,628	2,939	298	28,987	27,042	20.5	4,931	12.4	2,986	1,945

(Table A5 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
04-Jan-09	31,628	2,972	298	28,954	25,991	25.3	5,844	12.5	2,881	2,963
11-Jan-09	31,628	2,904	298	29,022	27,865	16.4	4,084	11.7	2,927	1,157
18-Jan-09	31,628	2,884	298	29,042	28,430	14.3	3,642	11.9	3,030	612
25-Jan-09	31,628	2,837	298	29,089	28,288	15.0	3,799	11.9	2,998	801
01-Feb-09	31,628	2,871	298	29,055	27,856	16.5	4,124	11.7	2,925	1,199
08-Feb-09	31,623	2,882	298	29,039	27,959	16.1	4,028	11.8	2,948	1,080
15-Feb-09	31,623	2,961	298	28,960	27,470	17.8	4,376	11.7	2,886	1,490
22-Feb-09	31,623	2,961	298	28,960	27,169	19.2	4,664	11.8	2,873	1,791
01-Mar-09	31,623	3,466	298	28,455	27,139	17.9	4,321	12.5	3,005	1,316
08-Mar-09	31,623	4,550	298	27,371	26,882	14.3	3,430	12.3	2,941	489
15-Mar-09	31,623	6,346	298	25,575	26,170	9.9	2,313	12.5	2,908	-595
22-Mar-09	31,623	6,632	298	25,289	25,698	11.0	2,497	12.8	2,906	-409
29-Mar-09	31,623	6,665	298	25,256	24,981	13.9	3,083	12.7	2,808	275
05-Apr-09	31,682	6,990	298	24,990	25,324	11.4	2,561	12.9	2,895	-334
12-Apr-09	31,682	6,862	298	25,118	23,612	19.7	4,127	12.5	2,621	1,506
19-Apr-09	31,682	6,994	298	24,986	25,236	11.8	2,644	13.0	2,894	-250
26-Apr-09	31,682	9,405	298	22,575	25,676	1.0	219	14.9	3,320	-3,101
03-May-09	31,682	9,405	298	22,575	25,256	2.4	528	14.6	3,209	-2,681
10-May-09	31,632	9,584	298	22,346	25,820	-1.3	-288	14.1	3,186	-3,474
17-May-09	31,632	9,578	298	22,352	25,163	1.3	288	14.1	3,099	-2,811
24-May-09	31,632	8,640	298	23,290	26,267	1.5	333	14.4	3,310	-2,977
31-May-09	31,632	6,954	298	24,976	27,208	3.7	897	13.0	3,129	-2,232
07-Jun-09	31,632	6,743	298	25,187	27,705	2.6	632	12.8	3,150	-2,518
14-Jun-09	31,632	5,738	298	26,192	29,570	0.4	109	13.4	3,487	-3,378
21-Jun-09	31,632	4,868	298	27,062	30,736	-0.4	-109	13.1	3,565	-3,674
28-Jun-09	31,632	4,389	298	27,541	30,342	2.6	708	13.1	3,509	-2,801
05-Jul-09	31,632	4,472	298	27,458	28,567	8.2	2,070	12.5	3,179	-1,109
12-Jul-09	31,632	4,473	298	27,457	30,508	1.7	468	13.0	3,519	-3,051
19-Jul-09	31,632	3,594	298	28,336	31,512	1.4	397	12.8	3,573	-3,176
26-Jul-09	31,632	3,591	298	28,339	30,180	5.7	1,526	12.6	3,367	-1,841
02-Aug-09	31,632	3,628	298	28,302	28,660	10.8	2,749	12.2	3,107	-358
09-Aug-09	31,632	3,846	298	28,084	31,422	0.9	250	12.9	3,588	-3,338
16-Aug-09	31,632	3,834	298	28,096	30,447	4.1	1,097	12.8	3,448	-2,351
23-Aug-09	31,632	3,858	298	28,072	29,564	6.9	1,816	12.6	3,308	-1,492
30-Aug-09	31,632	3,854	298	28,076	29,678	6.6	1,726	12.6	3,328	-1,602
06-Sep-09	31,632	4,481	298	27,449	29,612	4.5	1,187	12.8	3,350	-2,163
13-Sep-09	31,632	5,711	298	26,219	29,203	1.2	312	12.7	3,296	-2,984
20-Sep-09	31,632	6,680	298	25,250	28,179	0.8	192	12.5	3,121	-2,929
27-Sep-09	31,632	7,281	298	24,649	26,375	5.0	1,171	12.3	2,897	-1,726

**Table A6 Assessment of Resource Adequacy: Extreme Weather,
Planned Resource Scenario**

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
06-Apr-08	31,299	7,862	411	23,849	24,461	9.8	2,129	12.6	2,741	-612
13-Apr-08	31,299	7,313	411	24,398	22,911	19.9	4,046	12.6	2,559	1,487
20-Apr-08	31,299	7,116	411	24,595	24,340	13.9	2,995	12.7	2,740	255
27-Apr-08	31,299	7,286	411	24,425	24,217	13.0	2,807	12.0	2,599	208
04-May-08	31,311	6,821	411	24,901	24,010	16.7	3,560	12.5	2,669	891
11-May-08	31,311	7,729	411	23,993	24,908	9.2	2,018	13.4	2,933	-915
18-May-08	31,311	6,640	411	25,082	24,149	17.1	3,659	12.7	2,726	933
25-May-08	31,311	6,573	411	25,149	25,213	12.7	2,832	13.0	2,896	-64
01-Jun-08	31,311	5,899	411	25,823	26,392	10.4	2,425	12.8	2,994	-569
08-Jun-08	31,578	6,437	541	25,682	27,053	7.4	1,768	13.1	3,139	-1,371
15-Jun-08	31,578	5,471	541	26,648	28,749	5.1	1,303	13.4	3,404	-2,101
22-Jun-08	31,578	4,166	541	27,953	29,858	6.1	1,601	13.3	3,506	-1,905
29-Jun-08	31,578	4,108	541	28,011	29,565	7.3	1,912	13.3	3,466	-1,554
06-Jul-08	31,601	3,294	541	28,848	28,238	14.9	3,738	12.5	3,128	610
13-Jul-08	31,601	3,379	541	28,763	29,443	10.2	2,653	12.8	3,333	-680
20-Jul-08	31,601	3,302	541	28,840	30,682	6.2	1,693	13.0	3,535	-1,842
27-Jul-08	31,601	3,374	541	28,768	29,333	10.6	2,755	12.8	3,320	-565
03-Aug-08	31,601	3,558	541	28,584	27,910	15.3	3,784	12.5	3,110	674
10-Aug-08	31,601	3,628	541	28,514	30,690	5.1	1,392	13.2	3,568	-2,176
17-Aug-08	31,601	3,541	541	28,601	29,662	8.9	2,339	13.0	3,400	-1,061
24-Aug-08	31,601	3,640	541	28,502	28,788	11.6	2,971	12.8	3,257	-286
31-Aug-08	31,601	4,782	541	27,360	28,850	6.8	1,748	12.6	3,238	-1,490
07-Sep-08	31,613	5,958	541	26,197	28,757	2.7	690	12.7	3,250	-2,560
14-Sep-08	31,613	5,833	541	26,322	28,476	4.3	1,074	12.8	3,228	-2,154
21-Sep-08	31,613	7,106	541	25,049	27,404	3.1	755	12.8	3,110	-2,355
28-Sep-08	31,613	7,510	541	24,645	25,601	8.1	1,848	12.3	2,804	-956
05-Oct-08	32,618	7,423	541	25,737	24,970	16.0	3,545	12.5	2,778	767
12-Oct-08	32,618	7,129	541	26,031	22,505	31.2	6,196	13.5	2,670	3,526
19-Oct-08	32,618	7,619	541	25,541	23,093	24.6	5,049	12.7	2,601	2,448
26-Oct-08	32,618	7,602	541	25,558	23,388	23.0	4,771	12.5	2,601	2,170
02-Nov-08	32,917	8,736	541	24,723	24,074	15.7	3,348	12.6	2,699	649
09-Nov-08	32,944	7,636	541	25,850	24,322	19.3	4,190	12.3	2,662	1,528
16-Nov-08	32,944	8,060	541	25,426	25,054	13.7	3,053	12.0	2,681	372
23-Nov-08	32,944	6,304	541	27,182	25,645	18.8	4,299	12.1	2,762	1,537
30-Nov-08	32,944	6,271	541	27,215	26,148	16.7	3,885	12.1	2,818	1,067
07-Dec-08	32,944	5,635	541	27,851	26,868	16.1	3,864	12.0	2,881	983
14-Dec-08	32,944	4,264	541	29,222	26,982	21.8	5,227	12.5	2,987	2,240
21-Dec-08	32,944	3,650	541	29,836	27,091	24.3	5,828	12.8	3,083	2,745
28-Dec-08	32,944	3,268	541	30,218	26,614	28.8	6,752	13.4	3,148	3,604

(Table A6 continued)

Week Ending Day	Total Resources MW	Total Reductions in Resources MW	Demand Measures MW	Available Resources MW	Required Resources MW	Available Reserve %	Available Reserve MW	Required Reserve %	Required Reserve MW	Reserve Above Requirement MW
04-Jan-09	32,944	3,374	541	30,112	25,569	33.8	7,598	13.6	3,055	4,543
11-Jan-09	33,276	3,548	541	30,269	27,126	25.8	6,198	12.7	3,055	3,143
18-Jan-09	33,276	3,458	541	30,359	27,562	23.9	5,852	12.5	3,055	2,797
25-Jan-09	33,276	3,410	541	30,407	27,438	24.7	6,024	12.5	3,055	2,969
01-Feb-09	33,276	3,444	541	30,373	27,075	26.4	6,352	12.7	3,054	3,298
08-Feb-09	33,271	3,492	541	30,320	27,189	25.6	6,185	12.7	3,054	3,131
15-Feb-09	33,271	3,638	541	30,174	26,756	27.3	6,464	12.9	3,046	3,418
22-Feb-09	33,271	3,579	541	30,233	26,478	29.0	6,801	13.0	3,046	3,755
01-Mar-09	33,271	4,005	541	29,807	26,399	28.2	6,561	13.6	3,153	3,408
08-Mar-09	33,841	5,227	541	29,155	26,107	26.4	6,086	13.2	3,038	3,048
15-Mar-09	33,841	7,150	541	27,232	25,241	21.5	4,827	12.7	2,836	1,991
22-Mar-09	33,841	7,459	541	26,923	24,852	22.7	4,976	13.2	2,905	2,071
29-Mar-09	33,841	7,535	541	26,847	24,252	25.9	5,517	13.7	2,922	2,595
05-Apr-09	34,756	7,807	541	27,491	24,535	27.3	5,899	13.6	2,943	2,956
12-Apr-09	34,756	7,794	541	27,504	23,158	36.1	7,298	14.6	2,952	4,346
19-Apr-09	34,756	8,060	541	27,238	24,539	26.3	5,670	13.8	2,971	2,699
26-Apr-09	34,756	10,457	541	24,841	24,598	15.2	3,277	14.1	3,034	243
03-May-09	34,756	10,464	541	24,834	24,250	16.8	3,566	14.0	2,982	584
10-May-09	34,706	10,573	541	24,675	24,935	12.4	2,712	13.5	2,972	-260
17-May-09	34,706	10,581	541	24,667	24,213	15.4	3,288	13.3	2,834	454
24-May-09	34,706	10,135	541	25,113	25,347	12.6	2,816	13.7	3,050	-234
31-May-09	34,706	7,860	541	27,388	26,313	17.0	3,971	12.4	2,896	1,075
07-Jun-09	35,891	7,260	541	29,173	26,826	22.4	5,336	12.5	2,989	2,347
14-Jun-09	35,891	6,105	541	30,328	28,493	19.7	4,999	12.5	3,164	1,835
21-Jun-09	35,891	5,299	541	31,134	29,617	18.0	4,740	12.2	3,223	1,517
28-Jun-09	35,891	5,370	541	31,063	29,188	19.9	5,158	12.7	3,283	1,875
05-Jul-09	35,891	5,487	541	30,946	27,805	26.1	6,411	13.3	3,270	3,141
12-Jul-09	35,891	5,409	541	31,024	29,439	18.5	4,853	12.5	3,268	1,585
19-Jul-09	35,891	4,429	541	32,004	30,305	18.5	4,995	12.2	3,296	1,699
26-Jul-09	35,891	4,502	541	31,931	29,254	23.0	5,973	12.7	3,296	2,677
02-Aug-09	35,891	4,574	541	31,859	27,980	29.1	7,175	13.4	3,296	3,879
09-Aug-09	35,891	4,631	541	31,802	30,288	17.8	4,807	12.2	3,293	1,514
16-Aug-09	35,891	4,634	541	31,799	29,519	21.3	5,573	12.6	3,293	2,280
23-Aug-09	35,891	4,741	541	31,692	28,737	24.6	6,248	12.9	3,293	2,955
30-Aug-09	35,891	4,727	541	31,706	28,847	24.1	6,152	12.9	3,293	2,859
06-Sep-09	35,891	5,512	541	30,921	28,685	21.5	5,471	12.7	3,235	2,236
13-Sep-09	35,891	6,238	541	30,195	28,234	19.9	5,020	12.2	3,059	1,961
20-Sep-09	35,891	7,293	541	29,140	27,169	19.9	4,842	11.8	2,871	1,971
27-Sep-09	35,891	7,945	541	28,488	25,529	25.5	5,785	12.5	2,826	2,959

Table A7 Energy Production Capability Forecast

Month	Firm Resource Scenario Forecast Energy Production Capability (GWh)	Planned Resource Scenario Forecast Energy Production Capability (GWh)
Apr 2008	13,830	13,830
May 2008	16,507	16,507
Jun 2008	16,861	16,861
Jul 2008	17,896	17,896
Aug 2008	17,511	17,511
Sep 2008	15,534	15,542
Oct 2008	13,948	14,596
Nov 2008	15,854	16,545
Dec 2008	17,948	18,663
Jan 2009	18,430	19,218
Feb 2009	16,544	17,256
Mar 2009	16,729	17,880
Apr 2009	14,127	15,770
May 2009	16,894	18,593
Jun 2009	17,327	19,700
Jul 2009	17,653	20,104
Aug 2009	17,416	19,867
Sep 2009	16,635	19,008

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Appendix B Transmission Projects

Table B Transmission Projects

Zone	CAA-ID#	Transmitter	Description	Proposed I/S Date
East	2007-Ex333	Hydro One Networks Inc.	Whitby DESN 1: New shunt capacitor	2008-Q3
	N/A	Hydro One Networks Inc.	Kingston-Gardiner TS#2 new transformer station	2008-Q4
	2000-001	Hydro One Networks Inc.	Hawthorne TS: Switchyard expansion to facilitate connection of the HQ 230 kV ties lines.	2008-Q4
	2000-001	Hydro One Networks Inc.	Hawthorne to Quebec border 230 kV double circuit interconnection line	2009-Q1
	2006-245	Hydro Ottawa	Cyrville TS new transformer station	2008-Q3
Essa	2006-233	Hydro One Networks Inc.	Orangeville TS Shunt Capacitor	2008-Q2
	2006-211	Hydro One Networks Inc.	Holland Marsh TS new transformer station	2009-Q3
	2005-190	Hydro One Networks Inc.	Stayner TS modifications and new 230 kV line	2009-Q2
Niagara	2002-085	Hydro One Networks Inc.	Queenston Flow West	To be determined
	2007-257	Hydro One Networks Inc.	Improve thermal rating of 115 kV circuits D9HS, D10S and Q11S	2009-Q2 2010-Q2
		Hydro One Networks Inc.	Venessa jct to Norfolk TS new 115 kV	2009-Q2
		Hydro One Networks Inc.	Retirement of Q5G (25 Hz CCT)	2008 - Q4
		Hydro One Networks Inc.	Reconnect of Beck G7 to 60 Hz	2008 - Q4
		Hydro One Networks Inc.	Thermal upgrade of Q4N	2009 - Q2
		Hydro One Networks Inc.	Retirement of Niagara 25 Hz system	2009 - Q2
Northeast	N/A	Great Lakes Power Ltd.	Maggie TS 115 kV structure replacement	2008-Q4
	N/A	Great Lakes Power Ltd.	Mackay TS 115 kV yard refurbishment - on going	2008-Q4
	N/A	Great Lakes Power Ltd.	Third Line TS 115 kV yard refurbishment - on going	2009-Q4
	2005-207	Five Nations Energy Inc.	New transformer at Kashechewan	2009-Q3
	2005-207	Five Nations Energy Inc.	New back up transformer at Fort Albany	2008-Q3
	2000-015	Five Nations Energy Inc.	New 115 kV transmission line from Moosonee to Victor Mine	2008-Q1
	2002-086	Hydro One Networks Inc.	Reinforce existing transmission facilities to supply Victor Mine	2008-Q2
Northwest	2006-247	Hydro One Networks Inc.	Lakehead TS static var compensator (SVC)	2009-Q4
Southwest	2006-225	Hydro One Networks Inc.	Woodstock TS low voltage shunt capacitors	2008-Q2
	2006-221	Hydro One Networks Inc.	Halton TS and Meadowvale TS low voltage shunt capacitors	2009-Q2
	2006-EX299	Hydro One Networks Inc.	Burlington TS: Replace the lower rated 230/115 kV transformer and buswork that limits the station capability.	2008-Q2 2010-Q3
	2006-249	Hydro One Networks Inc.	Bruce to Orangeville 230 kV circuits upgrade	2009-Q1
	2007-295	Hydro One Networks Inc.	Middleport TS 4x250 MVAR cap banks	2009 - Q2
	2007-295	Hydro One Networks Inc.	Buchanan TS 1x200 MVAR cap bank	2009 - Q3
	2007-295	Hydro One Networks Inc.	Nanticoke TS 2x250 MVAR cap banks	2009 - Q4
Toronto	2006-213	Hydro One Networks Inc.	Pleasant TS new transformer station	2008-Q2
West	2007-EX318	Hydro One Networks Inc.	Belle River TS low voltage shunt capacitors	2008-Q2
	2007-EX328	Hydro One Networks Inc.	Lambton TS: Replace Air Blast breakers with SF6 breakers, replace buswork (strain bus with rigid bus) and reconfigure lines	2009-Q1
	2007-265	Hydro One Networks Inc.	Keith autotransformers replacement	2009-Q4

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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

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Oct 20 2008 5:00 AM	Oct 26 2008 6:00 PM	Bruce A TS: 21-B562L, B562L::LONGWOOD_TS::BRUCE_A_TS, W52-B562L, B562L::LONGWOOD_TS::BRUCE_A_TS	4675791	8 Hour	CWW	FABC NBLIP	Oct 20 to Oct 24 1100 - 1200 MW when BLIP positive 750 - 850 MW when BLIP negative Oct 24 to Oct 26 950 MW when BLIP positive 600 MW when BLIP negative 500 MW
Oct 18 2008 7:00 AM	Oct 24 2008 5:00 PM	Longwood TS: HL562, B562L::LONGWOOD_TS::BRUCE_A_TS, PL562, W52-B562L, W52-B562L, 21-B562L, B562L::LONGWOOD_TS::BRUCE_A_TS	5046792	3 Hour	CWW	FABC NBLIP	1100 - 1200 MW when BLIP positive 750 - 850 MW when BLIP negative 500 MW

Table C2 East Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
May 30 2008 2:01 PM	Oct 31 2008 2:01 PM	Dobbin TS: T2-K, T2, T2-A	4796540	Immediate	CWW	None	
Oct 06 2008 4:01 AM	Oct 31 2008 4:01 PM	Galetta JCT: C27P::GALETTA_JCT::CHATS_FALLS_SS, DL33, AL27, C27P::GALETTA_JCT::CHATS_FALLS_SS, DL3, C27P::DOBBIN_TS::GALETTA_JCT, C27P::DOBBIN_TS::GALETTA_JCT, HL27, D_BUS	5277035	8 Hour	CWW	FIO	30 MW
Sep 08 2008 6:00 AM	Sep 26 2008 6:00 PM	St.Lawrence TS: 49-L20H, L20H::CROSBY_JCT::HINCHINBROOKE_SS, L20H::ST.LAWRENCE_TS::EASTON_JCT, T2-L20H, L20H::ST.LAWRENCE_TS::EASTON_JCT, L20H::EASTON_JCT::BROCKVILLE_TS, L20H::CROSBY_JCT::HINCHINBROOKE_SS, L20H::EASTON_JCT::BROCKVILLE_TS, L20H::EASTON_JCT::CROSBY_JCT, 24T2-L20H, L20H::EASTON_JCT::CROSBY_JCT, L20H::CROSBY_JCT::CROSBY_TS, L20H::CROSBY_JCT::CROSBY_TS, T3-L20H, 10-L20H	5299333	12 Hour	CWW	None	
Sep 21 2009 6:00 AM	Oct 09 2009 4:00 PM	Easton Yule JCT: L22H::EASTON_YULE_JCT::SMITHS_FALLS_TS, L22H::EASTON_JCT::HINCHINBROOKE_SS, L22H::EASTON_YULE_JCT::SMITHS_FALLS_TS, L22H::EASTON_YULE_JCT::EASTON_JCT, L22H::EASTON_JCT::HINCHINBROOKE_SS, L22H::EASTON_YULE_JCT::EASTON_JCT, L22H::BROCKVILLE_TS::EASTON_JCT, L22H::EASTON_YULE_JCT::ST.LAWRENCE_TS, 49-L22H, 24T1-L22H, 10-L22H, T3-L22H, L22H::EASTON_YULE_JCT::ST.LAWRENCE_TS, L22H::BROCKVILLE_TS::EASTON_JCT	5310000	8 Hour	CWW	None	
Mar 09 2009 6:00 AM	Mar 27 2009 6:00 PM	Hinchinbrooke SS: L21H::CROSBY_JCT::HINCHINBROOKE_SS, L21H::CROSBY_JCT::CROSBY_TS, L21H::EASTON_YULE_JCT::SMITHS_FALLS_TS, L21H::EASTON_YULE_JCT::SMITHS_FALLS_TS, L21H::CROSBY_JCT::CROSBY_TS, 49-L21H, T1-L21H, T3-L21H, L21H::CROSBY_JCT::HINCHINBROOKE_SS, L21H::EASTON_YULE_JCT::CROSBY_JCT, L21H::EASTON_YULE_JCT::CROSBY_JCT, L21H::ST.LAWRENCE_TS::EASTON_YULE_JCT, 10-L21H, T4-L21H, L21H::ST.LAWRENCE_TS::EASTON_YULE_JCT	5326751	8 Hour	CWW	None	
Oct 13 2008 5:00 AM	Nov 07 2008 6:00 PM	Dobbin TS: T5, T5-H, T5-D	5541971	8 Hour	CWW	None	
Aug 25 2008 5:00 AM	Oct 02 2008 6:00 PM	St.Lawrence TS: R33, PS33-1, PS33-2, PS33-2, PS33, PS33-S, R33-2, R33-1, PS33-2, L33P::FDRX-USA_LXP_TS::ST.LAWRENCE_TS, L33P::FDRX-USA_LXP_TS::ST.LAWRENCE_TS, PS33-S	5542139	16 Hour	CWW	None	
Apr 21 2008 8:00 AM	May 02 2008 4:00 PM	Chenau TS: 4X6	5564362	8 Hour	CWW	None	
Apr 14 2008 7:00 AM	Apr 21 2008 4:00 PM	Chats Falls SS: AH	5564691	8 Hour	CWW	None	
Apr 22 2008 7:00 AM	Apr 29 2008 4:00 PM	Chats Falls SS: HL3	5564757	8 Hour	CWW	None	
Sep 09 2008 7:00 AM	Sep 26 2008 5:00 PM	Smiths Falls TS: L21H::EASTON_YULE_JCT::SMITHS_FALLS_TS, L21H::ST.LAWRENCE_TS::EASTON_YULE_JCT, L21H::ST.LAWRENCE_TS::EASTON_YULE_JCT, L21H::EASTON_YULE_JCT::CROSBY_JCT, L21H::EASTON_YULE_JCT::CROSBY_JCT, L21H::CROSBY_JCT::HINCHINBROOKE_SS, L21H::CROSBY_JCT::HINCHINBROOKE_SS, L21H::EASTON_YULE_JCT::SMITHS_FALLS_TS, T1-L21H, 10-L21H, L21H::CROSBY_JCT::CROSBY_TS, L21H::CROSBY_JCT::CROSBY_TS, T3-L21H, 49-L21H, T4-L21H	5567386	8 Hour	CWW	None	
Aug 25 2008 8:00 AM	Oct 02 2008 4:00 PM	St.Lawrence TS: PS33-2, R33-1, R33, PS33-1, PS33, R33-2, PS33-S, L33P::FDRX-USA_LXP_TS::ST.LAWRENCE_TS, L33P::FDRX-USA_LXP_TS::ST.LAWRENCE_TS, PS33-2	5572275	4 Hour	CWW	None	
May 12 2008 4:30 AM	May 23 2008 4:00 PM	St.Lawrence TS: AL31	5636475	24 Hour	CWW	None	
Sep 22 2008 4:30 AM	Sep 28 2008 4:00 PM	Napanee TS: X22::GRETN_A_JCT::NAPANEE_TS, X22::GRETN_A_JCT::NAPANEE_TS, X22::GRETN_A_JCT::LENNOX_TS, T2-X22, T2-X22, X22::GRETN_A_JCT::PICTON_TS, X22::GRETN_A_JCT::PICTON_TS, 12-X22, X22::GRETN_A_JCT::LENNOX_TS	5667103	8 Hour	CWW	None	
Jun 01 2008 2:01 PM	Oct 31 2008 2:01 PM	Dobbin TS: T2-K, T2, T2-A	5679026	Immediate	CWW	None	
Jan 22 2008 3:15 PM	Jun 02 2008 1:20 PM	Dobbin TS: T2-A, T2-A	5679511	Immediate	CWW	None	
Nov 10 2008 6:00 AM	Nov 18 2008 12:00 PM	Hinchinbrooke SS: L3L23, P_BUS, H51L3, T2L3, T2L5, X3H::CATARAQUI_TS::HINCHINBROOKE_SS, X3H::CATARAQUI_TS::LENNOX_TS, X3H::CATARAQUI_TS::LENNOX_TS, HL3, T2, DL3, X3H::CATARAQUI_TS::HINCHINBROOKE_SS	5701131	3 Day	CWW	None	

Table C3 Essa Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Mar 24 2008 3:00 PM	Apr 25 2008 7:00 PM	Essa TS: 18-E8V, 2-S2E, S2E::STAYNER_TS::ESSA_TS, S2E::STAYNER_TS::ESSA_TS, 18-E9V, 18-S2E	5362870	3 Day	CWW	None	
Apr 28 2008 5:00 AM	May 09 2008 6:00 PM	Essa TS: T3-J, T3, 18T3-AT3, T3-R3	5541981	8 Hour	CWW	None	
May 12 2008 5:00 AM	May 23 2008 6:00 PM	Essa TS: T4-D, T4, 18T4-HT4	5542008	8 Hour	CWW	None	
Sep 11 2008 5:00 PM	Sep 25 2008 7:00 AM	Essa TS: L7L8	5579073	Non-Recallable	CWW	None	
Mar 24 2008 4:00 AM	Apr 25 2008 7:00 PM	Essa TS: AL8, 18-E8V, L7L8	5579134	4 Hour	CWW	None	
Sep 02 2008 5:00 AM	Sep 14 2008 9:00 PM	Essa TS: 18-X504E, X504E::HANMER_TS::ESSA_TS, 33-X504E, X504E::HANMER_TS::ESSA_TS	5682719	36 Hour	CWW	FN FS	1400 MW 600 MW

Table C4 Niagara Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Mar 31 2007 11:00 PM	Jan 22 2008 3:15 PM	Swann Rd 4: 1306, 1306	5006424	Non-Recallable	CWW	None	
Apr 07 2008 5:00 AM	Apr 12 2008 6:00 PM	Beck #2 TS: PA301::BECK_#2_TS::NIAGARA_345_CTS, PA301::BECK_#2_TS::NIAGARA_345_CTS, 28-PA301	5128143	48 Hour	CWW	NY import W NY export W	550 MW 540 MW
Apr 07 2008 7:00 AM	Apr 18 2008 5:00 PM	Beck #2 TS: TL21L23	5205809	6 Day	CWW	None	
Apr 28 2008 7:00 AM	May 09 2008 5:00 PM	Beck #2 TS: DL24	5205847	6 Day	CWW	None	
May 19 2008 7:00 AM	May 30 2008 5:00 PM	Beck #2 TS: KL23	5205899	6 Day	CWW	None	
Jun 02 2008 7:00 AM	Jun 13 2008 5:00 PM	Beck #2 TS: L25T302	5205913	6 Day	CWW	None	
May 12 2008 4:00 AM	May 23 2008 6:00 PM	Louth JCT: 69D10S-4, D10S::LOUTH_JCT::CARLTON_TS, D10S::LOUTH_JCT::CARLTON_TS, 69D10S-23, 40-D10S	5287194	4 Hour	CWW	None	
May 27 2008 4:00 AM	Jun 06 2008 6:00 PM	Louth JCT: D9HS::VANSICKLE_TS::LOUTH_JCT, D9HS::VANSICKLE_TS::LOUTH_JCT, T5-D9HS, D9HS::HOOPER'S_JCT::VANSICKLE_TS, 69D9HS-4, 23-D9HS, 40-D9HS, D9HS::DECEW_FALLS_SS::HOOPER'S_JCT, D9HS::DECEW_FALLS_SS::HOOPER'S_JCT, D9HS::LOUTH_JCT::CARLTON_TS, D9HS::HOOPER'S_JCT::VANSICKLE_TS, D9HS::LOUTH_JCT::CARLTON_TS	5287421	4 Hour	CWW	None	
Apr 14 2008 5:00 AM	Apr 19 2008 6:00 PM	Beck #2 TS: PA302::BECK_#2_TS::NIAGARA_345_CTS, PA302::BECK_#2_TS::NIAGARA_345_CTS, 28-PA302	5499751	48 Hour	CWW	NY import W NY export W	550 MW 540 MW
Sep 14 2008 11:00 PM	Dec 12 2008 6:00 PM	Beck #1 SS: E7_BUS	5797599	48 Hour	CWW	None	

Table C5 Northeast Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Sep 09 2008 8:00 AM	Sep 14 2008 5:00 PM	Ansonville TS: T2, T2-H1, T2-LT2	5066717	4 Hour	CWW	None	
Jul 07 2008 5:30 AM	Jul 18 2008 4:00 PM	Martindale TS: S1R::MARTINDALE_TS::COPPER_CLIFF_JCT, S1R::MARTINDALE_TS::COPPER_CLIFF_JCT, T1-L	5482202	4 Hour	CWW	None	
Aug 25 2008 5:00 AM	Sep 18 2008 6:00 PM	Crystal Falls TS: T6-H24S, 1820H24S-7, 9-H24S	5503015	4 Hour	CWW	None	
Oct 06 2008 5:00 AM	Oct 24 2008 6:00 PM	Clarabelle JCT: S22A::CLARABELLE_JCT::ALGOMA_TS, 26-S22A, 9-S22A, S22A::MARTINDALE_TS::CLARABELLE_JCT, T2-S22A, S22A::CLARABELLE_JCT::CLARABELLE_TS, S22A::CLARABELLE_JCT::CLARABELLE_TS, S22A::CLARABELLE_JCT::ALGOMA_TS, S22A::MARTINDALE_TS::CLARABELLE_JCT	5525309	4 Hour	CWW	EWTE	50 MW
Mar 10 2008 6:00 AM	Apr 25 2008 7:00 PM	Tembec Smooth Rk JCT: 33H9K-27, 42H9K-MSO-2	5527123	4 Hour	CWW	None	
Jul 07 2008 5:00 AM	Jul 25 2008 6:00 PM	Widdifield SS: 38H24S-6, H24S::OTTO_HOLDEN_TS::WIDDIFIELD_SS, 6-H24S, 38H24S-6, H24S::OTTO_HOLDEN_TS::WIDDIFIELD_SS, 6-H24S	5528280	4 Hour	CWW	None	
Jul 21 2008 5:00 AM	Aug 01 2008 6:00 PM	Porcupine TS: T7, 30T7-T, 30T7-H	5542165	8 Hour	CWW	None	
Aug 11 2008 5:00 AM	Aug 22 2008 6:00 PM	Porcupine TS: T8, 30T8-H2, 30T8-T	5542170	8 Hour	CWW	None	
Sep 08 2008 7:00 AM	Sep 19 2008 4:00 PM	Hanmer TS: W6L502, 33T6-W, W6L504	5578904	4 Hour	CWW	None	
Nov 10 2008 5:30 AM	Nov 21 2008 6:00 PM	Cobden JCT: T1B::RED_ROCK_CGS::COBDEN_JCT, 69T1B-38, T1B::RED_ROCK_CGS::COBDEN_JCT	5579029	4 Hour	CWW	None	
May 26 2008 5:30 AM	Jun 06 2008 4:00 PM	Martindale TS: KT22, L23T22, T22, T22-22, T22-22, T22-E	5630294	4 Hour	CWW	None	
Jun 01 2008 4:00 AM	Jun 29 2008 7:00 PM	Sudbury JCT: L1S-LC1, 9-L1S	5782338	1 Day	CWW	None	
May 22 2008 5:00 PM	Jun 19 2008 9:00 AM	Mackay TS: #-1-GARTSHORE, #-1-GARTSHORE	5783654	Non-Recallable	CWW	None	
Jul 07 2008 6:00 AM	Jul 21 2008 8:00 AM	Mackay TS: 667, 783, NORTH BUS, 1416, 773	5784659	2 Day	CWW	None	
Jul 21 2008 1:00 PM	Aug 05 2008 10:00 AM	Gartshore TS: GRTSH2::MACKAY_T.S.:GARTSHORE_TS, GRTSH2::MACKAY_T.S.:GARTSHORE_TS	5789119	2 Day	CWW	None	
Aug 06 2008 2:30 PM	Aug 25 2008 9:00 AM	Mackay TS: NORTH BUS, 661, 670, 793, 639, 660	5789476	2 Day	CWW	None	
Aug 25 2008 9:30 AM	Sep 08 2008 3:00 PM	Mackay TS: 670, 661, 666	5789564	2 Day	CWW	None	

Table C6 Northwest Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Apr 07 2008 7:00 AM	May 16 2008 7:00 PM	Dryden TS: 25-M2D, M2D-D	5405100	4 Hour	CWW	None	
Mar 26 2008 7:00 AM	Apr 01 2008 5:00 PM	Whiteshell CTS: K22W::WHITESHELL_CTS::KENOR A_TS, K22W::WHITESHELL_CTS::KENOR A_TS, 34-K22W	5443018	4 Hour	CWW	OMTE, OMTW, EWTE	OMTE - 100 MW OMTW - 100 MW EWTE - 50 MW
Apr 09 2008 7:00 AM	Apr 15 2008 5:00 PM	Kenora TS: 34-K22W, K22W::WHITESHELL_CTS::KENOR A_TS, K22W::WHITESHELL_CTS::KENOR A_TS	5443022	4 Hour	CWW	OMTE, OMTW, EWTE	OMTE - 100 MW OMTW - 100 MW EWTE - 50 MW
Apr 23 2008 7:00 AM	Apr 29 2008 5:00 PM	Whiteshell CTS: K22W::WHITESHELL_CTS::KENOR A_TS, K22W::WHITESHELL_CTS::KENOR A_TS, 34-K22W	5443026	4 Hour	CWW	Note: This outage is coincident with a W22M outage. EWTE, EWTW, OMTE, OMTW	These penalties are for K22W + W22M outage. EWTE - 105 MW EWTW - 100 MW OMTE - 125 MW OMTW - 100 MW

(Table C6 continued)

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
May 21 2008 7:00 AM	May 27 2008 5:00 PM	Kenora TS: K21W::WHITESHELL_CTS::KENOR A_TS, 34-K21W, K21W::WHITESHELL_CTS::KENOR A_TS	5443030	4 Hour	CWW	OMTE, OMTW, EWTE	OMTE - 100 MW OMTW - 100 MW EWTE - 50 MW
Jun 18 2008 7:00 AM	Jun 24 2008 5:00 PM	Kenora TS: K24F::KENORA_TS::FORT_FRANCE S_TS, K24F::KENORA_TS::FORT_FRANCE S_TS, 22-K24F, 34-K24F	5443051	4 Hour	CWW	OMTE, OMTW, EWTE, MPFN, MPFS	OMTE - 50 MW OMTW - 250 MW EWTE - 75 MW MPFN - 50 MW MPFS - 140 MW
Jul 02 2008 7:00 AM	Jul 08 2008 5:00 PM	Kenora TS: K24F::KENORA_TS::FORT_FRANCE S_TS, 22-K24F, 34-K24F, K24F::KENORA_TS::FORT_FRANCE S_TS	5443056	4 Hour	CWW	OMTE, OMTW, EWTE, MPFN, MPFS	OMTE - 50 MW OMTW - 250 MW EWTE - 75 MW MPFN - 50 MW MPFS - 140 MW
Jul 16 2008 7:00 AM	Jul 22 2008 5:00 PM	Kenora TS: 34-K24F, K24F::KENORA_TS::FORT_FRANCE S_TS, 22-K24F, K24F::KENORA_TS::FORT_FRANCE S_TS	5443061	4 Hour	CWW	OMTE, OMTW, EWTE, MPFN, MPFS	OMTE - 50 MW OMTW - 250 MW EWTE - 75 MW MPFN - 50 MW MPFS - 140 MW
Jul 30 2008 7:00 AM	Aug 05 2008 5:00 PM	Fort Frances TS: 22-K24F, 34-K24F, K24F::KENORA_TS::FORT_FRANCE S_TS, K24F::KENORA_TS::FORT_FRANCE S_TS	5443066	4 Hour	CWW	OMTE, OMTW, EWTE, MPFN, MPFS	OMTE - 50 MW OMTW - 250 MW EWTE - 75 MW MPFN - 50 MW MPFS - 140 MW
Aug 13 2008 7:00 AM	Aug 19 2008 5:00 PM	Kenora TS: 34-K24F, 22-K24F, K24F::KENORA_TS::FORT_FRANCE S_TS, K24F::KENORA_TS::FORT_FRANCE S_TS	5443071	4 Hour	CWW	OMTE, OMTW, EWTE, MPFN, MPFS	OMTE - 50 MW OMTW - 250 MW EWTE - 75 MW MPFN - 50 MW MPFS - 140 MW
Aug 27 2008 7:00 AM	Sep 02 2008 5:00 PM	Kenora TS: 34-K24F, 22-K24F, K24F::KENORA_TS::FORT_FRANCE S_TS, K24F::KENORA_TS::FORT_FRANCE S_TS	5443076	4 Hour	CWW	Note: This outage is coincident with a W21M outage. EWTE, EWTW, OMTE, OMTW, MPFN, MPFS	These penalties are for K24F + W21M outage. EWTE - 105 MW EWTW - 200 MW OMTE - 150 MW OMTW - 250 MW MPFN - 50 MW MPFS - 140 MW
Apr 15 2008 9:00 AM	Apr 22 2008 12:00 PM	Port Arthur TS #1: 2P5M	5648582	1 Hour	CWW	None	
Aug 18 2008 8:00 AM	Sep 11 2008 6:00 PM	Marathon TS: 15-W21M, W21M::WAWA_TS::MARATHON_TS , 14-W21M, W21M::WAWA_TS::MARATHON_TS	5808939	2 Hour	CWW	EWTE, EWTW, OMTE, OMTW	EWTE - 105 MW EWTW - 100 MW OMTE - 50 MW OMTW - 50 MW
Apr 21 2008 8:00 AM	May 01 2008 6:00 PM	Marathon TS: 15-W22M, W22M::WAWA_TS::MARATHON_TS , 14-W22M, W22M::WAWA_TS::MARATHON_TS	5808929	2 Hour	CWW	EWTE, EWTW, OMTE, OMTW	EWTE - 105 MW EWTW - 100 MW OMTE - 50 MW OMTW - 50 MW
Sep 15 2008 8:00 AM	Sep 25 2008 6:00 PM	Wawa TS: W22M::WAWA_TS::MARATHON_TS , 15-W22M, W22M::WAWA_TS::MARATHON_TS , 14-W22M	5808934	2 Hour	CWW	EWTE, EWTW, OMTE, OMTW	EWTE - 105 MW EWTW - 100 MW OMTE - 50 MW OMTW - 50 MW

Table C7 Ottawa Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Oct 14 2008 5:00 AM	Oct 31 2008 4:00 PM	Merivale TS: L31L32	5505242	24 Hour	CWW	None	
Sep 18 2008 5:00 AM	Oct 10 2008 3:00 PM	Merivale TS: PL31	5505258	24 Hour	CWW	None	
Jun 01 2008 10:00 AM	Jun 08 2008 10:00 AM	OHSC JCT: 4803MSO-36	5563641	Non-Recallable	CWW	None	
Sep 28 2008 6:00 AM	Oct 04 2008 5:00 PM	Merivale TS: P2-P3, PL31, T21-P3, P2_BUS, P3_BUS, PL30, P1_BUS, P1-P2, P1-P2	5608381	4 Hour	CWW	None	
Nov 10 2008 6:00 AM	Nov 15 2008 5:00 PM	Merivale TS: K1_BUS, K1-K2, KL32, KL29, K1-K2, K2_BUS, T22-K2	5608415	4 Hour	CWW	None	
Mar 16 2008 5:00 PM	May 03 2008 7:00 PM	Hawthorne TS: T9-D, T1-K	5619315	3 Day	CWW	None	
May 05 2008 5:00 AM	May 15 2008 7:00 PM	Hawthorne TS: X522A::LENNOX_TS::HAWTHORNE_TS, X522A::LENNOX_TS::HAWTHORNE_TS, T3-LT3, 48-X522A, LT3W67, LT3_BUS, 12-X522A, DLT3	5619739	4 Hour	CWW	FIO	400 MW
May 20 2008 5:00 AM	May 29 2008 7:00 PM	Hawthorne TS: DLT3, 84T2-M30A, M30A::ALBION_TS::MERIVALE_TS, M30A::ALBION_TS::MERIVALE_TS, LT3_BUS, 48-M30A, T3-LT3, 6-M30A, M30A::ALBION_TS::HAWTHORNE_TS, LT3W67, M30A::ALBION_TS::HAWTHORNE_TS	5619782	8 Hour	CWW	None	

Table C8 Southwest Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Jan 05 2009 6:00 AM	Jan 30 2009 3:00 PM	Trafalgar TS: K1K2	4702290	3 Day	CWW	None	
Mar 25 2008 6:45 AM	Apr 04 2008 4:00 PM	Burlington TS: H2L36	5182548	6 Hour	CWW	None	
Apr 07 2008 7:00 AM	Apr 18 2008 5:00 PM	Burlington TS: H2L23	5286504	6 Day	CWW	None	
May 19 2008 7:00 AM	May 30 2008 5:00 PM	Burlington TS: L23L37	5286569	6 Day	CWW	None	
May 05 2008 7:00 AM	May 16 2008 5:00 PM	Middleport TS: L5L25	5286665	6 Day	CWW	None	
Jun 02 2008 7:00 AM	Jun 13 2008 5:00 PM	Burlington TS: A2L25	5286681	6 Day	CWW	None	
Jun 02 2008 7:00 AM	Jun 13 2008 5:00 PM	Middleport TS: KL25	5286695	6 Day	CWW	None	
Sep 15 2008 7:00 AM	Sep 26 2008 5:00 PM	Middleport TS: KL30	5286709	6 Day	CWW	None	
Sep 29 2008 7:00 AM	Oct 10 2008 5:00 PM	Middleport TS: L1L30	5286754	6 Day	CWW	None	
Oct 14 2008 7:00 AM	Oct 24 2008 5:00 PM	Burlington TS: A2L37	5286839	6 Day	CWW	None	
Oct 27 2008 7:00 AM	Nov 07 2008 5:00 PM	Burlington TS: H2L36	5286908	6 Day	CWW	None	
Sep 02 2008 6:00 AM	Nov 21 2008 3:00 PM	Milton SS: L70L73	5335735	5 Day	CWW	None	
Nov 04 2008 6:00 AM	Nov 14 2008 2:00 PM	Middleport TS: T3, T3-TL580, T3-LT3	5541951	8 Hour	CWW	FABC	0 - 50 MW
Jun 16 2008 6:00 AM	Sep 05 2008 7:00 PM	Nanticoke TS: T11-E, T11-H, T11	5542119	36 Hour	CWW	None	
Sep 11 2008 7:00 AM	Sep 11 2008 5:00 PM	Detweiler TS: 26-D9G, 60-D9G-26, 60-D9G-67, 60-D9G-K5, 5A1-D9G, D9G::SIEBERT_JCT::KITCHENER_#6_JCT, D9G::FREEPORT_JCT::SPEEDSVILLE_JCT, D9G::SIEBERT_JCT::KITCHENER_#6_JCT, D9G::C.G.E._JCT::SPEEDSVILLE_JCT	5546380	1 Hour	CWW	None	
Sep 08 2008 7:45 AM	Sep 19 2008 6:00 PM	Nanticoke TS: T7L581	5555508	4 Hour	CWW	None	
Jul 21 2008 7:00 AM	Aug 01 2008 6:00 PM	Nanticoke TS: T6T11	5555708	4 Hour	CWW	None	
Jun 16 2008 8:45 AM	Sep 05 2008 3:00 PM	Nanticoke TS: T11-H, T11, T11-E	5555841	4 Hour	CWW	None	
Mar 29 2008 6:15 AM	Apr 03 2008 2:00 PM	Middleport TS: T6-LT6, T6, T6-TL581	5556213	8 Hour	CWW	FABC	Mar 29 to Mar 30 0 - 50 MW Mar 30 to Mar 31 0 - 200 MW Mar 31 - Apr 3 100 - 400 MW
May 04 2008 4:00 AM	May 09 2008 6:00 PM	Buchanan TS: 19-W7W, 10-W7W, T2, 38W7W-19, 38W7W-10, W7W::BUCHANAN_TS::INGERSOLL_TS, W7W::INGERSOLL_TS::WOODSTOCK_TS, W7W::INGERSOLL_TS::WOODSTOCK_TS, W7W::BUCHANAN_TS::INGERSOLL_TS	5612015	4 Hour	CWW	None	
Jul 14 2008 7:00 AM	Jul 19 2008 5:00 PM	Buchanan TS: 19-W3T, W3T::BUCHANAN_TS::KETTLE_CREEK_JCT, W3T::KETTLE_CREEK_JCT::ST.THOMAS_TS, 11W3T, W3T::KETTLE_CREEK_JCT::ST.THOMAS_TS, W3T::BUCHANAN_TS::KETTLE_CREEK_JCT, W3T::KETTLE_CREEK_JCT::FORD_TALBOTVILLE_CTS, 11W3T, W3T::KETTLE_CREEK_JCT::FORD_TALBOTVILLE_CTS	5615148	3 Hour	CWW	None	
May 05 2008 6:00 AM	Jun 06 2008 6:00 PM	Trafalgar TS: HL21	5629878	5 Day	CWW	None	
Mar 25 2008 6:00 AM	Apr 18 2008 2:00 PM	Trafalgar TS: T15L17	5630051	5 Day	CWW	None	
Apr 26 2008 6:20 AM	May 09 2008 2:00 PM	Middleport TS: L2L28	5768655	8 Hour	CWW	None	
Oct 20 2008 6:20 AM	Oct 31 2008 2:00 PM	Middleport TS: L2L33	5768932	8 Hour	CWW	None	
Aug 18 2008 6:20 AM	Aug 29 2008 2:00 PM	Middleport TS: L81L85	5776356	24 Hour	CWW	FABC FABC FETT	Aug 18 to Aug 23 50 - 100 MW Aug 23 to Aug 29 50 - 250 MW 700 MW
Apr 28 2008 6:30 AM	May 16 2008 3:00 PM	Detweiler TS: ASC21, A_BUS, AL7, AL6, AL4, 26-M21D	5777751	8 Hour	CWW	FABC	Apr. 28 to May 5 100 - 250 MW May 5 to May 16 100 to 400 MW
Jun 02 2008 6:30 AM	Jun 20 2008 3:00 PM	Detweiler TS: AL4, AL7, AL6, A_BUS, 26-M21D, ASC21	5779539	8 Hour	CWW	FABC	Jun 2 to Jun 4 100 - 250 MW Jun 4 to Jun 14 100 - 400 MW Jun 14 to Jun 19 100 - 250 MW Jun 19 to Jun 20 100 - 400 MW
Jan 08 2008 1:07 PM	Jan 22 2008 3:15 PM	Detweiler JCT: D9G-D1W, D9G-D1W	5787227	3 Hour	CWW	None	
Jun 02 2008 7:00 AM	Jun 13 2008 6:00 PM	Burlington TS: H1L39, H1L28, H1H2, T6-H1, H1_BUS	5815236	4 Hour	CWW	None	

Table C9 Toronto Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Apr 07 2008 8:40 AM	Apr 25 2008 3:10 PM	Hearn SS: SC12, SC12SC, SC12A-A, SC12A	5298978	15 Day	CWW	None	
Apr 28 2008 6:30 AM	May 14 2008 2:30 PM	Cherrywood TS: AL543	5547707	8 Hour	CWW	None	
Sep 02 2008 6:30 AM	Sep 18 2008 2:30 PM	Cherrywood TS: L540A	5547780	8 Hour	CWW	None	
Oct 14 2008 6:30 AM	Oct 24 2008 4:00 PM	Horner TS: T3-R15K, R15K::HORNER_TS::VANSKO_JCT, R15K::VANSKO_JCT::MANBYWJCT, R15K::MANBYWJCT::MANBY_WEST_TS, R15K::MANBYWJCT::RICHVIEW_TS, R15K::MANBYWJCT::MANBY_WEST_TS, 88-R15K, 38-R15K, R15K::VANSKO_JCT::MANBYWJCT	5593984	2 Day	CWW	None	
Mar 18 2008 6:00 AM	May 02 2008 3:00 PM	Claireville TS: AL560	5629916	7 Day	CWW	None	
May 05 2008 6:00 AM	Jun 13 2008 3:00 PM	Claireville TS: AL510	5630149	7 Day	CWW	None	
Feb 06 2008 6:00 AM	Apr 22 2008 8:00 PM	Claireville TS: HL74, HT14, H1-H2, H1_BUS, H2_BUS, HL75, HL73, HL82, H1-H2	5740954	Non-Recallable	CWW	None	
May 05 2008 5:00 AM	May 26 2008 5:00 PM	Claireville TS: 51-V71RP, T14L71, KL71	5805629	2 Day	CWW	None	

Table C10 West Zone

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Apr 07 2008 4:00 AM	Apr 25 2008 6:00 PM	Sarnia Scott TS: L21L43	4300795	Non-Recallable	CWW	None	
Apr 28 2008 4:00 AM	May 16 2008 5:00 PM	Sarnia Scott TS: L6L23	4385678	Non-Recallable	CWW	None	
May 05 2008 4:00 AM	Jun 13 2008 6:00 PM	Lambton TS #2: 27-T7, T7-L4D, T7	4622862	2 Day	CWW	Michigan Import Michigan Export	May 5 to Jun 4 about 300 MW Jun 4 to Jun 13 575 MW 450 MW
Sep 02 2008 5:00 AM	Oct 10 2008 6:00 PM	Lambton TS #2: 27-T8, T8, T8-L4D	4622886	3 Day	CWW	Michigan Import Michigan Export	about 300 MW about 300 MW
Jan 22 2008 3:15 PM	Dec 31 2008 11:59 PM	Lambton TS #2: PS4, PS4-2, PS4-2, PS4-1, PS4-1, PS4	4764494	30 Minute	CWW	None	
May 05 2008 8:00 AM	May 29 2008 6:00 PM	Bostwick Road JCT: N21W::BOSTWICK_ROAD_JCT ::WONDERLAND_TS, T6- N21W, 62N21W-36, N21W::BOSTWICK_ROAD_JCT ::WONDERLAND_TS, N21W::BOSTWICK_ROAD_JCT ::BUCHANAN_TS, N21W::BOSTWICK_ROAD_JCT ::BUCHANAN_TS, 19-N21W	5205060	4 Hour	CWW	FABC FABC BLIP NBLIP	May 5 to May 16 100 - 400 MW May 16 to May 29 0 - 150 MW 500 MW 500 MW
Apr 18 2008 6:00 AM	May 09 2008 4:00 PM	Buchanan TS: L5L37	5249592	Non-Recallable	CWW	None	
Mar 29 2008 4:00 AM	Apr 23 2008 5:00 PM	Lambton TS #2: PL27	5372138	Non-Recallable	CWW	None	
Apr 27 2008 4:00 AM	May 23 2008 5:00 PM	Lambton TS #2: PL4	5372422	Non-Recallable	CWW	None	
May 25 2008 4:00 AM	Jun 17 2008 5:00 PM	Lambton TS #2: KL4	5372561	Non-Recallable	CWW	None	
Jun 18 2008 4:00 AM	Jul 15 2008 5:00 PM	Lambton TS #2: L27L28	5372672	Non-Recallable	CWW	None	
Jun 19 2008 4:00 AM	Jul 07 2008 5:00 PM	Lambton TS #2: L27L28, 27-L27V, PL27	5372685	Non-Recallable	CWW	FABC FABC BLIP NBLIP	Jun 19 to Jun 20 100 - 400 MW Jun 20 to Jul 7 0 - 150 MW 500 MW 500 MW
Aug 13 2008 4:00 AM	Sep 05 2008 5:00 PM	Lambton TS #2: PL23	5372721	Non-Recallable	CWW	None	
Aug 23 2008 4:00 AM	Sep 03 2008 5:00 PM	Lambton TS #2: 27-L23N, PL23, L23L51	5372946	Non-Recallable	CWW	FABC FABC BLIP NBLIP	Aug 23 to Aug 29 50 - 250 MW Aug 29 to Sep 3 0 - 150 MW 500 MW 500 MW
Sep 07 2008 4:00 AM	Oct 02 2008 5:00 PM	Lambton TS #2: PL29	5372957	Non-Recallable	CWW	None	
Oct 05 2008 4:00 AM	Nov 02 2008 5:00 PM	Lambton TS #2: P1P2	5373391	Non-Recallable	CWW	None	
Nov 03 2008 4:00 AM	Nov 25 2008 5:00 PM	Lambton TS #2: KL28	5373638	Non-Recallable	CWW	None	

(Table C10 continued)

Planned Start Date	Planned End Date	Equipment O/S	Outage Request Id	Recall Time	Type	Major Transmission Interface Impacted	Reduction in Limit
Sep 08 2008 4:00 AM	Sep 24 2008 5:00 PM	Lambton TS #2: L25L29, PL29, 27-L29C	5373254	Non-Recallable	CWW	FABC BLIP NBLIP	Sep 8 to Sep 12 0 - 150 MW Sep 12 to Sep 13 0 - 300 MW Sep 13 to Sep 15 90 - 410 MW Sep 15 to Sep 19 240 - 660 MW Sep 19 to Sep 22 240 - 510 MW Sep 22 to Sep 24 150 - 400 MW Sep 8 to Sep 12 500 MW 500 MW Sep 12 to Sep 19 700 MW 700 MW Sep 19 to Sep 24 500 MW
Nov 26 2008 4:00 AM	Dec 19 2008 5:00 PM	Lambton TS #2: K1K2	5373729	Non-Recallable	CWW	None	
Nov 03 2008 4:00 AM	Nov 14 2008 5:00 PM	Lambton TS #2: KL28, 27-L28C, L27L28	5378641	4 Hour	CWW	FABC BLIP NBLIP	0 - 150 MW 500 MW 500 MW
May 12 2008 6:00 AM	Jun 06 2008 4:00 PM	Buchanan TS: L42L45	5468321	Non-Recallable	CWW	None	
Mar 30 2008 8:00 AM	May 01 2008 6:00 PM	Lucasville JCT: 36N21W-62, 62N21W-36, N21W::BOSTWICK_ROAD_JCT::LUCASVILLE_JCT, N21W::BOSTWICK_ROAD_JCT::LUCASVILLE_JCT	5600869	4 Hour	CWW	FABC FABC FABC BLIP NBLIP	Mar 30 to Mar 31 0 - 200 MW Mar 31 to Apr 3 100 - 400 MW Apr 3 May 1 100 - 350 500 500
Apr 28 2008 4:00 AM	May 03 2008 6:00 PM	Buchanan TS: W12W::BUCHANAN_TS::INGERSOLL_TS, W12W::BUCHANAN_TS::INGERSOLL_TS, 38W12W-19, 38W12W-10, 19-W12W, W12W::INGERSOLL_TS::WOODSTOCK_TS, W12W::INGERSOLL_TS::WOODSTOCK_TS, T1, 10-W12W	5612006	4 Hour	CWW	None	
Oct 09 2008 4:00 AM	Oct 17 2008 5:00 PM	Lambton TS #2: PL29, T6-P1, PL24, P1P2, PL23, P1_BUS, KL37	5650420	4 Hour	CWW	FABC BLIP NBLIP	0 - 150 MW 500 MW 500 MW
Oct 26 2008 4:00 AM	Nov 02 2008 5:00 PM	Lambton TS #2: P2_BUS, P2-P3, PL27, PL4, P1P2	5650634	4 Hour	CWW	None	
Sep 12 2008 5:00 AM	Sep 19 2008 6:00 PM	Lambton TS #2: L25L29, 27-L25V, KL25	5699299	Non-Recallable	CWW	FABC BLIP NBLIP	Sep 12 to Sep 13 0 - 300 MW Sep 13 to Sep 15 90 - 410 MW Sep 15 to Sep 19 240 - 660 MW Sep 12 to Sep 19 700 MW 700 MW
Nov 19 2008 6:00 AM	Nov 30 2008 4:00 PM	Lambton TS #2: 27-L26L, KL26, L26L38	5699337	Non-Recallable	CWW	FABC BLIP NBLIP	0 - 150 MW 500 MW 500 MW
Feb 03 2009 4:00 AM	Feb 28 2009 5:00 PM	Lambton TS #2: KL25	5757364	Non-Recallable	CWW	None	
Jun 04 2008 5:00 AM	Jun 14 2008 4:00 PM	St.Clairex-USA CTS: L4D::ST.CLAIRX-USA_CTS::LAMBTON_TS_#2, L4D::ST.CLAIRX-USA_CTS::LAMBTON_TS_#2	5778837	Non-Recallable	CWW	FABC BLIP NBLIP Michigan Import Michigan Export	100 - 400 MW 500 MW 500 MW 575 MW 450 MW

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