

**18-MONTH OUTLOOK:**

# Ontario Demand Forecast

From July 2006 to December 2007



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## Executive Summary

The IESO is responsible for forecasting electricity demand on the IESO-controlled grid and for assessing whether transmission and generation facilities are adequate to meet Ontario's needs. This document presents the demand forecast for the period from July 2006 to December 2007 and supersedes the previous forecast released in March 2006.

### Economic Outlook

We have updated the economic assumptions that underpin the forecast to reflect the most recent outlook for the Ontario economy. The Ontario economy continues to be influenced by two main stories:

- A strong dollar and high energy prices have, and will continue to have, a negative impact on Ontario's manufacturers. Commodity prices in some segments have offset these negative impacts, but most companies are feeling the pinch of higher input costs and tougher competition on the price of their goods.
- Low interest rates continue to foster business investment and consumption. This growth is being driven by the service sector and construction.
- The economic outlook is similar to the previous forecast.

### Actual Demand

Since the last forecast we have recorded actual demand and weather data for March, April and May. Here are the results:

#### March

- March's weather was mild (the 9<sup>th</sup> warmest March in the last 37 years)
- Energy demand was 3.2% lower than forecast (2.2% lower on a weather-corrected basis)
- Weather-corrected peak demand was 955 MW lower than forecast.

#### April

- April's weather was very mild (the 4<sup>th</sup> mildest April in the last 37 years)
- Energy demand was 4.4% lower than forecast (2.5% lower on a weather-corrected basis)
- Weather-corrected peak demand was 1,000 MW lower than forecast

#### May

- May's average temperature was slightly warmer than normal. The last three days of May had record temperatures over 30°C
- Energy demand was 2.9% lower than forecast (3.7% lower on a weather-corrected basis)
- Weather-corrected peak demand was 150 MW higher than forecast. The actual peak was 3,100 MW higher than forecast due to the record temperatures.

Overall, the three-month period was warmer than normal. On a weather-corrected basis energy demand was 0.8% lower than demand for the same months of the previous year.

### Methodology

The demand forecast methodology is unchanged from the previous forecast. Consistent with the previous Outlook we present demand forecasts based on Weekly, Monthly and Seasonally normalized weather. Each of the normalization periods yield a different demand forecast and uncertainty distribution. The different periods serve various analytical purposes or needs.

Since the methodology remains the same, the only changes are the updating of the models for the most recent data and re-estimating the equations.

### Demand Forecast

The demand forecast is similar to the previous forecast, albeit lower. The only changes have been the inclusion of actual data and an updated economic forecast. Actual demand for the first five months of the year have been significantly lower than forecast due to mild weather and much lower industrial demand.

Table 1 summarizes the peak and energy demand forecast covered in this 18-month forecast.

**Table 1: Demand Forecast**

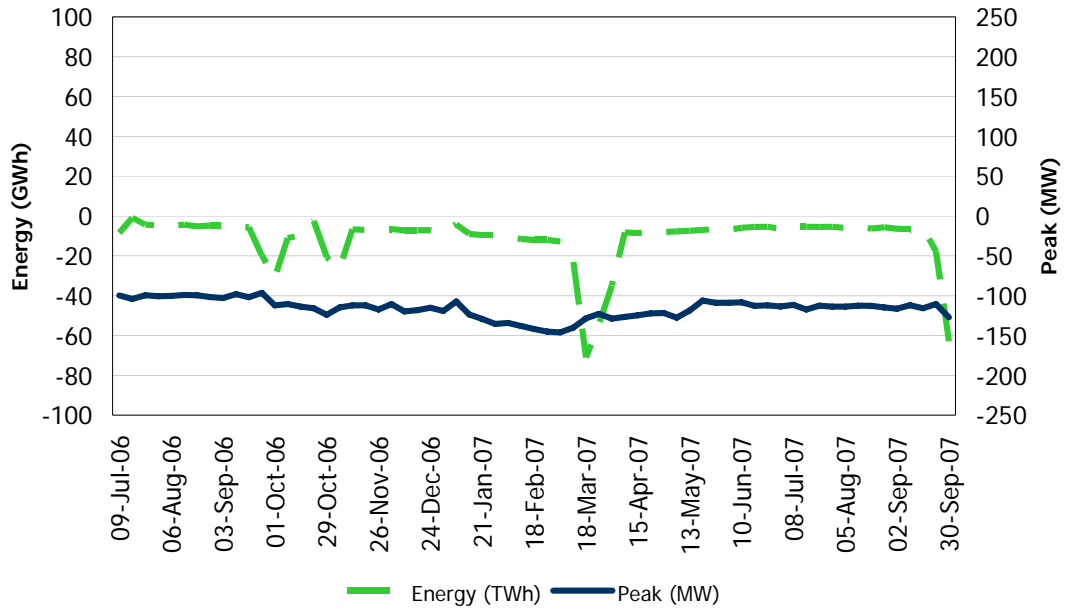
Season	Weekly Normal Weather Peak (MW)	Monthly Normal Weather Peak (MW)	Seasonal Normal Weather Peak (MW)	Extreme Weather Peak (MW)
Summer 2006	24,182	25,397	25,573	27,278
Winter 2006-07	24,455	24,768	24,973	25,826
Summer 2007	24,526	25,741	25,916	27,622

Year	Actual TWh	% Growth	Weather Corrected TWh	% Growth
2004 Energy	153.4	1.1%	153.7	1.3%
2005 Energy	157.0	2.3%	154.7	0.7%
2006 Energy (Forecast)	155.5	-0.9%	155.5	0.5%
2007 Energy (Forecast)	158.1	1.7%	158.1	1.7%

Figure 1 shows the difference between the previous and current forecast (monthly normalized). This is evident in the graph.

Figure 1: Comparison of Current and Previous Forecast (Current less Previous)



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# 1.0 Introduction

## 1.1 Outlook Documents

The Ontario Electricity Market Rules (Chapter 5 Section 7.1) require that a demand forecast for the next 18 months be produced and published on a quarterly basis. This Ontario Demand Forecast meets this requirement and covers the period from July 2006 to December 2007. It supersedes the previous forecast released March 24, 2006.

## 1.2 Demand Forecast Document

This document provides an 18-Month forecast of electricity demand for Ontario, based on the stated assumptions and using the methodology described in the document “Methodology to Perform Long Term Assessments” (IESO\_REP\_0266) (found on the IESO web site at [http://www.ieso.ca/imoweb/pubs/marketReports/Methodology\\_RTAA\\_2006jun.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/Methodology_RTAA_2006jun.pdf)). Readers may envision other scenarios, recognizing the uncertainties associated with various input assumptions, and are encouraged to use their own judgement in considering possible future scenarios. This forecast provides a base upon which changes in assumptions can be considered.

Ontario demand is the sum of coincident loads plus the losses on the IESO-controlled grid. This demand forecast was based on actual demand, weather and economic data through the end of March 2006. Data for April and May 2006 has been incorporated into the tables and figures of this document. This document is divided into the following sections:

- Section 2.0 looks at historical demand
- Section 3.0 describes the assumptions used in this forecast of electricity demand
- Section 4.0 has a summary of forecast results
- Appendices A through C contain additional forecast details and analysis.

Readers are invited to provide comments or suggestions regarding the content of this or future reports. To do so, please call the IESO Help Centre at 905-403-6900 or 1-888-448-7777 or send an email to [helpcentre@ieso.ca](mailto:helpcentre@ieso.ca), or to [forecasts.demand@ieso.ca](mailto:forecasts.demand@ieso.ca).

Electronic copies of the forecast and weather scenarios are available upon request.

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## 2.0 Historical Demand

This section covers historical energy and peak demand. Ontario measures peak demand as the average over the course of a clock hour. The weather-corrected numbers are generated based on Monthly Normal weather.

### 2.1 Historical Review

The historical database now includes the experiences for March, April and May. This period was milder than normal. Another item of note was the high temperatures experienced at the end of May. Demand peaked at just below 25,000 MW and exceeded the previous peak demand for May by 4,500 MW.

Figure 2.1 shows the daily temperatures for May sorted from highest to lowest. The shaded area denotes the range of temperatures experienced over the last 35 years. The hot, humid weather is evident in the graph.

Figure 2.1: Daily Afternoon Temperature – May

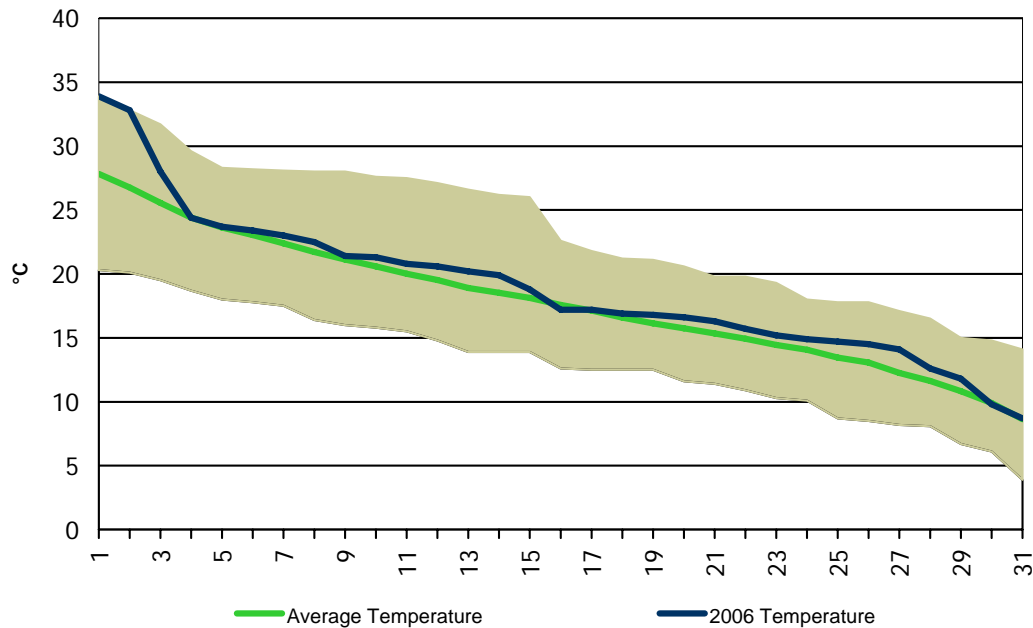


Table 2.1 contains a summary of the weather and demand for the months that have been incorporated into the model and report since the last Outlook. A couple of items to note:

- All months were milder than normal.
- All three monthly minimums occurred on a Sunday at 5 a.m.

Table 2.1: Historical Weather and Demand Summary

Historical Analysis		March	April	May
Weather - Actual	Average Temperature (°C)	5.2	12.7	19.0
	Minimum Temperature (°C)	-2.8	3.7	8.7
	Maximum Temperature (°C)	17.5	21.4	33.9
Weather - Monthly Normal	Monthly Normal Average Temperature (°C)	3.1	10.7	17.0
	Monthly Normal Minimum Temperature (°C)	-8.0	0.2	8.6
	Monthly Normal Maximum Temperature (°C)	10.5	25.0	27.2
Demand - Actual	Peak Demand (MW)	21,772	19,582	24,857
	Average Hour (MW)	17,742	15,990	16,032
	Minimum Hour (MW)	13,274	12,020	11,812
	90th Percentile (MW)	20,091	18,469	18,116
	Percent above 20,000 (MW)	11.2%	0.0%	5.7%
	# of Hours Above 20,000 (MW)	83	0	42
	Energy Demand (GWh)	13,200	11,513	11,927
Demand - Weather Corrected	Peak Demand (MW)	21,866	19,924	21,891
	Energy Demand (GWh)	13,332	11,746	11,831
Demand - Forecast	Peak Demand (MW)	22,575	20,957	21,743
	Energy Demand (GWh)	13,635	12,048	12,280

Notes for Table 2.1 – Weather is for Toronto. Temperature is the daily high. Forecast is the most recent for that period.

## 2.2 Historical Energy Demand

Actual energy demand was 36,640 GWh (36,912 GWh weather-corrected) for March to May. This was 1.2% lower than the same months a year earlier (0.8% lower on a weather-corrected basis). Weakness in the electrically intense industrial sectors has meant that demand has been relatively soft since the summer.

Figure 2.2 shows the 52-week moving average of the actual and weather-corrected energy demand. The significant weather impact of the summer is seen in the figure as it drives up energy demand. Although the summer of 2002 had episodes of extreme heat it was not sustained like 2005. The earlier drop-off into the summer of 2003 coincides with an increase in the Canadian dollar and a cool summer.

Figure 2.2: Energy Demand – 52-Week Moving Average

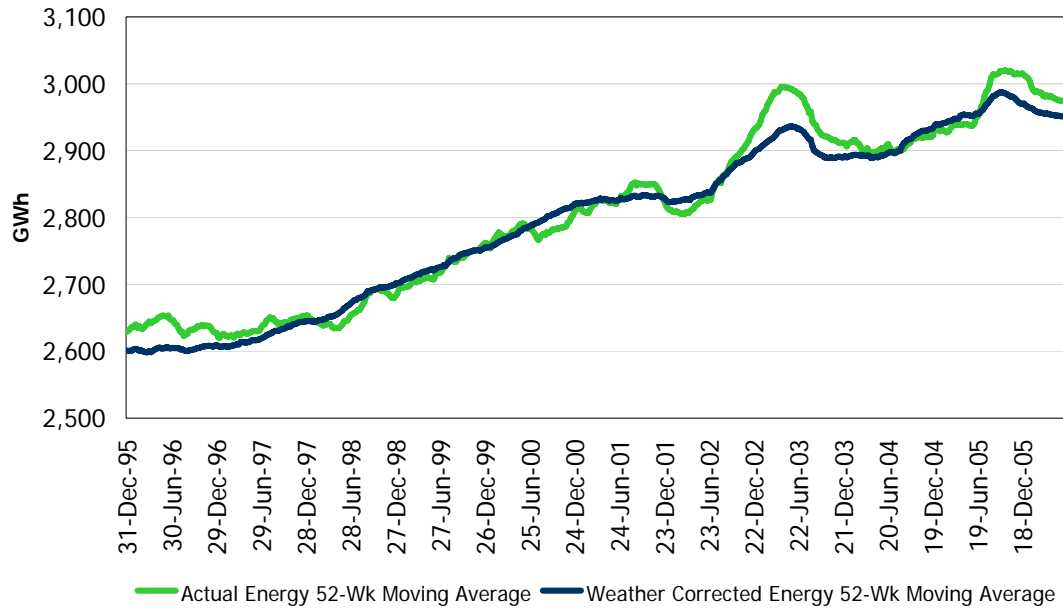


Table 2.2 shows the weekly energy demand for the past fifteen months. The table has the actual and weather-corrected demand for each week. If the weather correction is positive it means that the weather was milder than normal. As well, the table notes any item of significance for the week.

Table 2.2: Actual and Weather Corrected Weekly Energy Demand

Week Ending	Actual Energy (GWh)	Weather Corrected Energy (GWh)	Weather Correction (GWh)	Week Number	Notes for Week
06-Mar-05	3,169	3,150	-19	9	
13-Mar-05	3,206	3,121	-85	10	
20-Mar-05	3,041	3,040	-1	11	Good Friday
27-Mar-05	2,884	2,899	16	12	Easter Monday
03-Apr-05	2,869	2,921	52	13	
10-Apr-05	2,772	2,898	127	14	5% Voltage Reduction April 7
17-Apr-05	2,706	2,794	88	15	
24-Apr-05	2,738	2,764	26	16	
01-May-05	2,756	2,687	-69	17	
08-May-05	2,662	2,656	-6	18	
15-May-05	2,676	2,678	2	19	
22-May-05	2,637	2,631	-6	20	
29-May-05	2,617	2,637	20	21	Victoria Day
05-Jun-05	2,827	2,753	-74	22	
12-Jun-05	3,348	2,940	-408	23	
19-Jun-05	2,964	2,863	-101	24	
26-Jun-05	3,090	2,972	-118	25	Power Warning June 24
03-Jul-05	3,207	2,996	-211	26	Power Warning June 28-29, Canada Day
10-Jul-05	3,050	2,940	-109	27	
17-Jul-05	3,486	3,117	-369	28	All-Time Peak Demand
24-Jul-05	3,353	3,194	-159	29	Power Warning July 18-21
31-Jul-05	3,069	3,062	-7	30	
07-Aug-05	3,312	3,090	-223	31	Power Warning & 5% Voltage Reduction August 3-4
14-Aug-05	3,309	3,124	-185	32	Power Warning August 9-10
21-Aug-05	3,051	3,037	-14	33	
28-Aug-05	2,968	2,949	-19	34	

(Table 2.2 continued)

Week Ending	Actual Energy (GWh)	Weather Corrected Energy (GWh)	Weather Correction (GWh)	Week Number	Notes for Week
04-Sep-05	3,016	2,988	-28	35	Labour Day
11-Sep-05	2,901	2,872	-29	36	
18-Sep-05	3,058	2,887	-171	37	
25-Sep-05	2,916	2,842	-74	38	
02-Oct-05	2,772	2,790	18	39	
09-Oct-05	2,805	2,727	-78	40	
16-Oct-05	2,660	2,705	45	41	
23-Oct-05	2,757	2,754	-3	42	
30-Oct-05	2,838	2,793	-45	43	
06-Nov-05	2,780	2,898	118	44	Remembrance Day
13-Nov-05	2,809	2,869	60	45	
20-Nov-05	2,910	2,904	-5	46	All-Time November peak
27-Nov-05	3,061	2,923	-138	47	
04-Dec-05	3,020	3,022	2	48	
11-Dec-05	3,205	3,133	-72	49	Christmas Day Boxing Day & New Year's Day
18-Dec-05	3,287	3,167	-120	50	
25-Dec-05	3,107	3,106	-1	51	
01-Jan-06	2,801	2,860	59	52	
08-Jan-06	3,064	3,141	77	53	
15-Jan-06	3,051	3,240	189	54	
22-Jan-06	3,136	3,328	191	55	
29-Jan-06	3,080	3,261	181	56	
05-Feb-06	3,002	3,191	189	57	
12-Feb-06	3,173	3,164	-9	58	
19-Feb-06	3,183	3,175	-9	59	
26-Feb-06	3,138	3,113	-25	60	
05-Mar-06	3,166	3,115	-51	61	
12-Mar-06	2,959	3,092	133	62	
19-Mar-06	2,996	2,982	-13	63	
26-Mar-06	2,973	2,947	-25	64	
02-Apr-06	2,785	2,890	104	65	Good Friday Easter Monday
09-Apr-06	2,839	2,908	69	66	
16-Apr-06	2,619	2,673	54	67	
23-Apr-06	2,652	2,694	42	68	
30-Apr-06	2,675	2,718	42	69	
07-May-06	2,605	2,593	-12	70	
14-May-06	2,625	2,640	14	71	
21-May-06	2,604	2,620	16	72	Victoria Day
28-May-06	2,630	2,656	25	73	

### 2.3 Historical Peak Demand

Peak demands are heavily influenced by weather. Despite the fact that the recent weather has been milder than normal, high peaks can be generated during periods of extreme cold or heat. The March peak occurred on the second coldest day of the month, the April peak occurred on the coldest day and the May peak occurred on the second hottest day of the month.

Figure 2.3 shows the daily peak demand versus the daily afternoon temperature for the months of March 2006 to May 2006. The data is further divided into weekdays and weekends (and holidays). Here are some points on the graph and the data in it:

- Demand is lower on weekends and holidays than during the work week.
- The highest demand occurred during the last three days of May when temperature was in excess of 28°C. This is the highest May peak ever.
- The peak for March 2006 (21,772 MW) ranks 11<sup>th</sup> out of all the daily March peaks of the past fifteen years.
- The April 2006 peak (19,582 MW) ranks 12<sup>th</sup> on the list of April daily peaks.



Figure 2.3: March to May Peak Days – Demand and Temperature

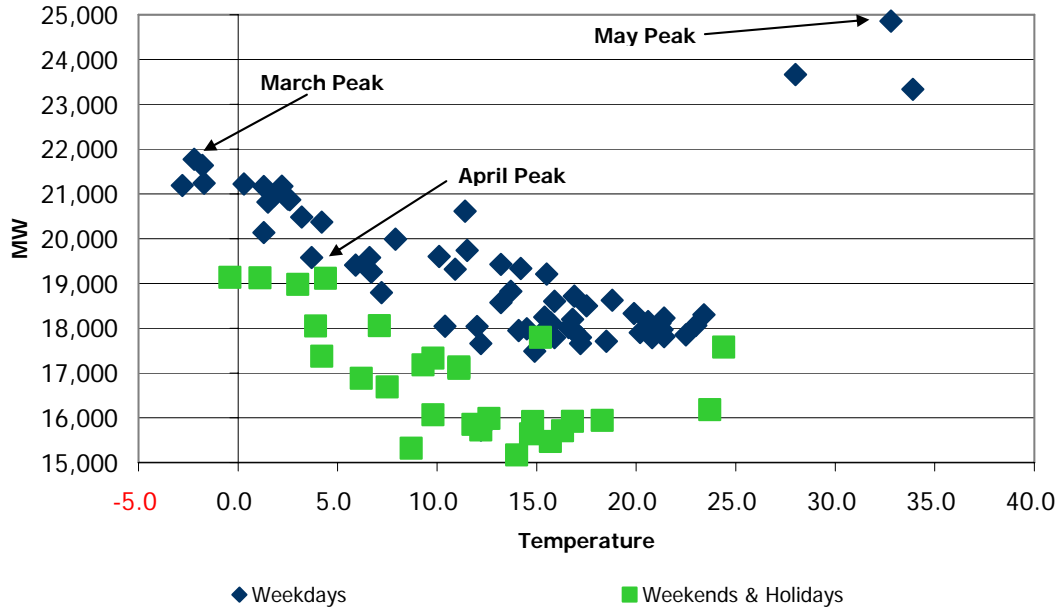


Figure 2.4 displays the 52-week moving average of both actual and weather-corrected peak demand. The profile is similar to that of the energy demand with the high-point being the summer/fall of 2005.

Figure 2.4: Peak Demand – 52-Week Moving Average

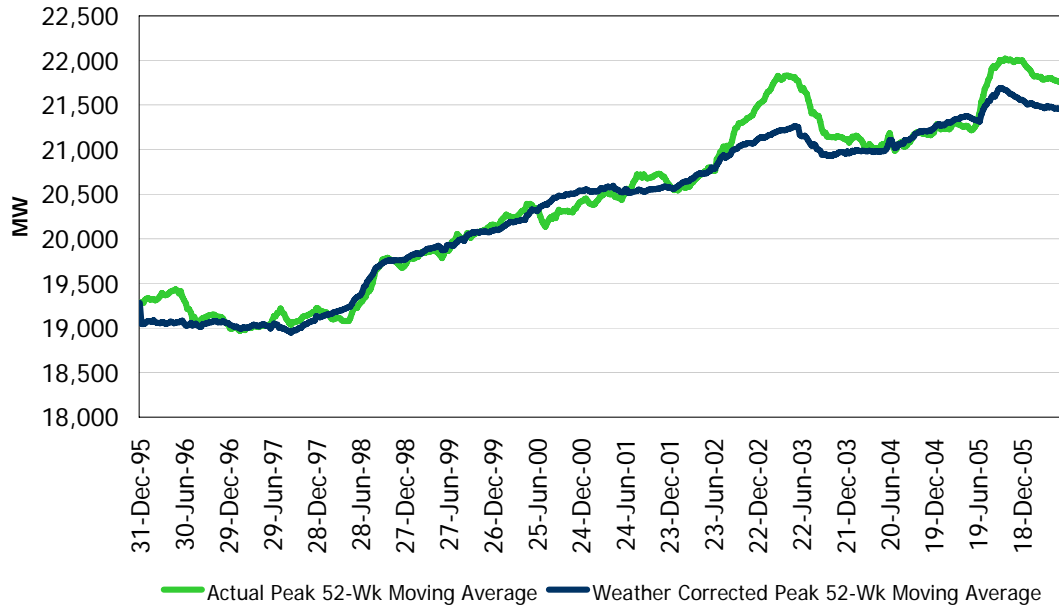


Table 2.3 contains the actual and weather-corrected weekly peak demand for the past 15 months. The table shows the daily afternoon maximum temperature for the actual peak day.

Table 2.3: Actual and Weather Corrected Weekly Peak Demand

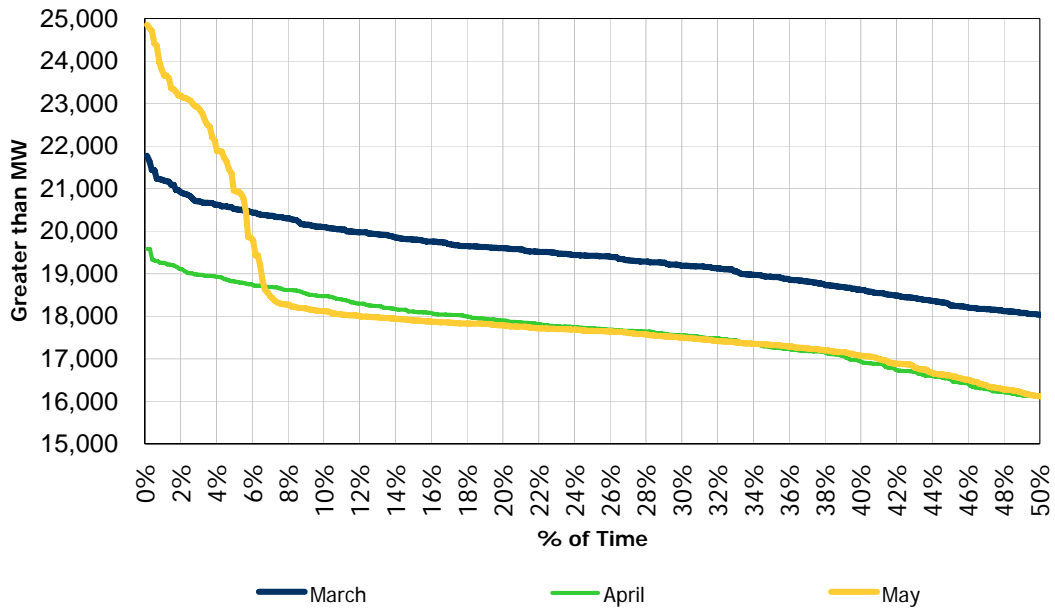
Week Ending	Week Number	Peak Day	Actual Peak (MW)	Weather Corrected Peak (MW)	Actual Peak Day Temperature (°C)
06-Mar-05	9	28-Feb-05	22,187	22,240	1.8
13-Mar-05	10	08-Mar-05	22,724	22,146	-8.5
20-Mar-05	11	14-Mar-05	20,975	21,332	-0.8
27-Mar-05	12	23-Mar-05	20,777	20,917	1.5
03-Apr-05	13	28-Mar-05	19,649	19,901	6.6
10-Apr-05	14	04-Apr-05	19,343	20,583	10.9
17-Apr-05	15	11-Apr-05	18,695	19,286	7.9
24-Apr-05	16	20-Apr-05	18,534	18,974	16.2
01-May-05	17	25-Apr-05	19,336	19,183	6.5
08-May-05	18	02-May-05	18,341	18,179	8.6
15-May-05	19	11-May-05	18,623	18,688	22.6
22-May-05	20	16-May-05	18,362	18,498	11.0
29-May-05	21	26-May-05	18,779	19,079	24.2
05-Jun-05	22	02-Jun-05	20,001	18,960	26.0
12-Jun-05	23	10-Jun-05	24,793	20,930	30.5
19-Jun-05	24	14-Jun-05	24,995	23,257	29.7
26-Jun-05	25	24-Jun-05	23,802	21,844	34.0
03-Jul-05	26	27-Jun-05	26,157	23,973	31.6
10-Jul-05	27	04-Jul-05	23,463	23,248	29.5
17-Jul-05	28	13-Jul-05	26,160	24,607	34.6
24-Jul-05	29	18-Jul-05	25,857	24,344	33.3
31-Jul-05	30	25-Jul-05	25,068	23,642	33.8
07-Aug-05	31	04-Aug-05	25,050	22,811	32.8
14-Aug-05	32	09-Aug-05	25,816	24,602	32.9
21-Aug-05	33	15-Aug-05	22,134	22,296	27.6
28-Aug-05	34	26-Aug-05	21,485	20,640	27.4
04-Sep-05	35	29-Aug-05	22,913	22,747	28.4
11-Sep-05	36	07-Sep-05	22,213	22,196	27.5
18-Sep-05	37	13-Sep-05	23,914	21,112	30.1
25-Sep-05	38	21-Sep-05	21,282	20,246	28.5
02-Oct-05	39	26-Sep-05	20,064	19,908	22.3
09-Oct-05	40	04-Oct-05	20,752	19,453	25.8
16-Oct-05	41	12-Oct-05	19,163	19,436	13.2
23-Oct-05	42	20-Oct-05	19,211	19,101	11.9
30-Oct-05	43	26-Oct-05	19,960	19,551	8.1
06-Nov-05	44	02-Nov-05	20,065	20,815	12.3
13-Nov-05	45	10-Nov-05	20,390	20,685	5.7
20-Nov-05	46	17-Nov-05	21,279	21,081	2.7
27-Nov-05	47	24-Nov-05	22,564	21,727	-6.3
04-Dec-05	48	02-Dec-05	21,746	21,790	-0.8
11-Dec-05	49	07-Dec-05	23,173	22,983	-4.3
18-Dec-05	50	14-Dec-05	23,766	23,322	-4.8
25-Dec-05	51	19-Dec-05	23,377	23,040	-4.7
01-Jan-06	52	28-Dec-05	20,167	20,798	2.7
08-Jan-06	1	06-Jan-06	21,941	22,508	-5.2
15-Jan-06	2	09-Jan-06	21,905	23,069	2.6
22-Jan-06	3	16-Jan-06	23,052	24,233	-5.0
29-Jan-06	4	25-Jan-06	22,404	23,592	-0.6
05-Feb-06	5	31-Jan-06	21,398	22,864	1.3
12-Feb-06	6	08-Feb-06	22,230	22,685	-6.1
19-Feb-06	7	16-Feb-06	22,321	22,485	-0.9
26-Feb-06	8	20-Feb-06	21,928	21,689	-3.4
05-Mar-06	9	28-Feb-06	22,264	22,059	-5.3
12-Mar-06	10	06-Mar-06	21,224	21,866	0.3
19-Mar-06	11	14-Mar-06	20,958	20,708	1.8
26-Mar-06	12	20-Mar-06	21,238	21,195	-1.7
02-Apr-06	13	27-Mar-06	19,737	20,844	11.5
09-Apr-06	14	05-Apr-06	19,582	19,793	3.7
16-Apr-06	15	12-Apr-06	18,717	19,740	16.9
23-Apr-06	16	18-Apr-06	17,869	18,547	15.5
30-Apr-06	17	25-Apr-06	18,796	18,526	7.2
07-May-06	18	04-May-06	18,063	18,224	23.0
14-May-06	19	10-May-06	18,303	18,710	23.4
21-May-06	20	18-May-06	17,986	18,178	14.5
28-May-06	21	26-May-06	18,624	18,762	18.8

## 2.4 Load Duration Curves

Figure 2.5 displays the percent of time that the hourly demand on the system exceeds a certain level. The graph shows the percent of hours for the months of March, April and May 2006. All curves are a product of the weather experienced in those months.

March generally has the highest load duration curve as it experiences the coldest weather of the three months. April and May are very similar except for the sharp increase due to the last three days of May where afternoon temperatures averaged in excess of 30°C.

Figure 2.5: Load Duration Curves - March, April and May



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## 3.0 Forecasting Process and Assumptions

A detailed description of the forecasting methodology can be found in the document entitled “Methodology to Perform Long Term Assessments” (IESO\_REP\_0266) (found on the IESO web site at [http://www.ieso.ca/imoweb/pubs/marketReports/Methodology\\_RTAA\\_2006jun.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/Methodology_RTAA_2006jun.pdf)).

The forecast of electricity demand requires inputs and/or assumptions. This section looks at each class of drivers.

### 3.1 Calendar Drivers for Forecast

Calendar variables are addressed in the Methodology document. Essentially, forecasting the calendar impacts – days of the week, holidays, sunrise and sunset – are pretty straightforward. This Outlook incorporates the changes to Daylight Savings Time (DST) starting in March 2007. At that point DST will begin three weeks earlier (March 11<sup>th</sup>, 2007) and end one week later (November 4<sup>th</sup>, 2007).

### 3.2 Economic Drivers for Forecast

To produce an energy and peak demand forecast, an economic forecast of various drivers is required. We use a consensus of four major, publicly available provincial forecasts to generate the economic drivers used in the demand forecast. Table 3.1 summarizes the key economic drivers for the energy and peak demand forecast. The Ontario growth index is a weighting of the economic drivers as they relate to electricity demand. The 18-Month outlook only considers the median economic growth scenario.

Table 3.1: Forecast of Ontario Economic Drivers

Year	Ontario Employment		Ontario Housing Starts		Ontario Growth Index	
	Thousands	Annual Growth (%)	Thousands	Annual Growth (%)	Index	Annual Growth (%)
1995	5,091	2.0	31.9	-23.3	1.025	1.42
1996	5,152	1.2	39.5	23.9	1.035	1.04
1997	5,269	2.3	50.0	26.5	1.053	1.70
1998	5,438	3.2	50.1	0.2	1.077	2.23
1999	5,618	3.3	62.9	25.6	1.102	2.33
2000	5,797	3.2	67.4	7.1	1.128	2.39
2001	5,923	2.2	70.3	4.2	1.150	1.91
2002	6,018	1.6	79.6	13.3	1.169	1.69
2003	6,199	3.0	80.9	1.7	1.197	2.43
2004	6,309	1.8	79.9	-1.3	1.219	1.80
2005	6,367	0.9	69.7	-12.8	1.235	1.31
2006 (f)	6,437	1.1	64.5	-7.4	1.251	1.28
2007 (f)	6,508	1.1	64.5	0.0	1.266	1.25

### 3.3 Weather Drivers for Forecast

Since forecasting long-term weather is not possible, weather scenarios are generated based on historical data. The analytical studies that the IESO produces serve a variety of purposes and

needs. As such, a variety of inputs may be required. Therefore we produce demand forecasts based on Weekly, Monthly and Seasonal normal weather. Additionally, a demand forecast is also generated based on Extreme weather.

In general, the weekly normalized weather gives the lowest peak demands, monthly normalized gives higher peak demands and seasonally normalized the highest. Each of these scenarios will therefore have a different Load Forecast Uncertainty (LFU). As we move from weekly to monthly and then to seasonal, we get higher peak demands but get progressively lower uncertainty around those peaks.

The weather scenarios are generated using the following steps:

- For each day over the past 31 years a "weather factor" is calculated based on the weather conditions of that day (temperature, wind speed, cloud cover and humidity). This weather factor represents the MW impact on demand if those weather conditions were observed in the forecast horizon.
- The daily weather factors are sorted from highest to lowest within their normalization periodicity – they are sorted within the week, month or season.
- Normal weather is based on the median value of the sorted weather factors across the 31 years of history. For example (using monthly normalization), the median value of the maximum weather factor from each January from 1975 to 2005 would be the first day in the normal January. The median value of the second highest weather factor from each January from 1975 to 2005 would be the second day in the normal January. This is repeated until all days in the week, month or season are generated.
- Extreme weather is generated in a similar manner except that we use the maximum, rather than the median value from the sorted data. The weekly, monthly and seasonal normalizations will have points in their extreme weather set in common.

Load Forecast Uncertainty (LFU) - a measure of demand fluctuations due to weather variability - is a critical part of the analysis. In conjunction with the normal weather forecast, LFU is valuable in determining a distribution of potential outcomes under various weather conditions. The resource adequacy assessments use the normal weather forecast in combination with LFU to consider a full range of peak demands that can occur under various weather conditions with varying probability of occurrence.

The Extreme weather scenario is valuable for studying situations where the system is under duress. The Extreme weather scenario is useful when examining peak conditions but is unrealistic from an energy demand standpoint, as severe weather conditions do not persist over a long time period.

Using monthly normalized weather gives the lowest forecast error of daily peak demand. Both weekly and seasonally normalized weather are also used to conduct various analyses. The seasonally normalized weather will continued to be used to produce the "Expected Seasonal" peak demand.

Table 3.2 has information about the Monthly Normal and Extreme weather scenarios. For each week, the table shows the historical weather used for the peak day of that week. The table shows the daily high (temperature) and wind speed. Not shown but used in forecasting demand are humidity and cloud cover. We use six weather stations in the demand models – the data in the

table below is for Toronto. The weather scenarios were updated for data through the end of March 2006.

**Table 3.2: Monthly Normal and Extreme Weather**

Week Ending	Monthly Normal Peak Date	Monthly Normal Temperature (°C)	Normal Wind Speed (km/hr)	Extreme Peak Date	Extreme Temperature (°C)	Extreme Wind Speed (km/hr)
09-Jul-06	06-Jul-93	30.2	29	16-Jul-99	33.8	25
16-Jul-06	15-Jul-97	30.2	11	14-Jul-95	36.7	17
23-Jul-06	03-Jul-83	30.7	16	03-Jul-02	34.7	21
30-Jul-06	16-Jul-98	30.6	20	01-Jul-02	35.1	15
06-Aug-06	15-Aug-78	28.9	15	09-Aug-01	35.4	30
13-Aug-06	06-Aug-83	30.8	9	07-Aug-01	35.3	28
20-Aug-06	20-Aug-03	30.3	14	08-Aug-01	37.2	25
27-Aug-06	04-Aug-87	28.6	18	02-Aug-88	30.8	15
03-Sep-06	02-Aug-00	27.5	22	14-Aug-88	33.5	24
10-Sep-06	13-Sep-82	27.4	12	02-Sep-73	33.3	9
17-Sep-06	20-Sep-00	27.5	30	04-Sep-73	32.2	19
24-Sep-06	20-Sep-94	26.1	14	16-Sep-91	31.2	30
01-Oct-06	27-Sep-94	19.5	16	22-Sep-70	26.7	21
08-Oct-06	05-Oct-88	10.1	20	01-Oct-02	28.8	34
15-Oct-06	07-Oct-81	9.5	40	12-Oct-88	4.6	24
22-Oct-06	17-Oct-75	7.8	15	20-Oct-74	2.2	27
29-Oct-06	29-Oct-83	5.6	25	26-Oct-79	2.5	27
05-Nov-06	30-Oct-92	4.0	10	07-Nov-93	2.6	26
12-Nov-06	11-Nov-79	3.8	16	12-Nov-95	0.5	34
19-Nov-06	26-Nov-75	0.6	7	20-Nov-78	-3.6	12
26-Nov-06	19-Nov-84	-1.6	17	21-Nov-87	-8.0	23
03-Dec-06	26-Nov-85	0.2	17	29-Nov-76	-6.1	32
10-Dec-06	28-Dec-78	-5.8	2	15-Dec-89	-8.5	18
17-Dec-06	27-Dec-78	-3.4	30	24-Dec-89	-9.1	26
24-Dec-06	25-Dec-90	-4.0	31	26-Dec-83	-12.9	29
31-Dec-06	17-Dec-79	-7.3	25	26-Dec-93	-17.0	33
07-Jan-07	17-Jan-92	-4.2	32	06-Jan-94	-14.0	31
14-Jan-07	16-Jan-85	-5.6	22	26-Jan-94	-17.7	22
21-Jan-07	14-Jan-88	-11.9	8	15-Jan-94	-21.4	20
28-Jan-07	05-Jan-96	-16.1	13	10-Jan-82	-15.8	41
04-Feb-07	14-Jan-78	-13.5	35	16-Jan-94	-13.8	15
11-Feb-07	15-Feb-91	-13.5	37	05-Feb-95	-17.6	41
18-Feb-07	13-Feb-97	-7.1	24	06-Feb-95	-15.4	19
25-Feb-07	24-Feb-97	-6.5	32	18-Feb-79	-13.1	27
04-Mar-07	26-Feb-86	-8.0	0	13-Feb-79	-17.0	16
11-Mar-07	16-Mar-94	-8.0	31	03-Mar-03	-14.3	6
18-Mar-07	09-Mar-75	-3.9	23	11-Mar-84	-11.9	46
25-Mar-07	14-Mar-97	0.0	19	09-Mar-84	-8.9	6
01-Apr-07	02-Apr-78	1.2	20	25-Mar-02	-3.5	15

(Table 2.2 continued)

Week Ending	Monthly Normal Peak Date	Monthly Normal Temperature (°C)	Normal Wind Speed (km/hr)	Extreme Peak Date	Extreme Temperature (°C)	Extreme Wind Speed (km/hr)
08-Apr-07	08-Apr-00	0.2	38	06-Apr-82	-7.4	38
15-Apr-07	17-Apr-83	5.3	17	07-Apr-03	-2.0	36
22-Apr-07	20-Apr-78	3.4	27	17-Apr-02	28.2	22
29-Apr-07	27-Apr-88	7.1	28	27-Apr-90	29.4	20
06-May-07	27-Apr-98	8.6	25	06-May-00	30.1	29
13-May-07	11-May-90	11.4	35	09-May-79	29.7	22
20-May-07	12-May-92	23.4	16	19-May-96	28.8	39
27-May-07	26-May-89	24.8	30	23-May-75	27.8	7
03-Jun-07	30-May-94	27.2	23	29-May-87	32.0	18
10-Jun-07	07-Jun-89	25.7	17	29-Jun-05	29.8	11
17-Jun-07	15-Jun-79	29.5	25	27-Jun-05	31.6	13
24-Jun-07	09-Jun-84	29.3	19	18-Jun-94	35.2	10
01-Jul-07	14-Jun-87	34.0	30	17-Jun-94	32.6	13
08-Jul-07	06-Jul-93	30.2	29	16-Jul-99	33.8	25
15-Jul-07	15-Jul-97	30.2	11	14-Jul-95	36.7	17
22-Jul-07	03-Jul-83	30.7	16	03-Jul-02	34.7	21
29-Jul-07	16-Jul-98	30.6	20	01-Jul-02	35.1	15
05-Aug-07	15-Aug-78	28.9	15	09-Aug-01	35.4	30
12-Aug-07	06-Aug-83	30.8	9	07-Aug-01	35.3	28
19-Aug-07	20-Aug-03	30.3	14	08-Aug-01	37.2	25
26-Aug-07	04-Aug-87	28.6	18	02-Aug-88	30.8	15
02-Sep-07	02-Aug-00	27.5	22	14-Aug-88	33.5	24
09-Sep-07	13-Sep-82	27.4	12	02-Sep-73	33.3	9
16-Sep-07	20-Sep-00	27.5	30	04-Sep-73	32.2	19
23-Sep-07	20-Sep-94	26.1	14	16-Sep-91	31.2	30
30-Sep-07	27-Sep-94	19.5	16	22-Sep-70	26.7	21
07-Oct-07	05-Oct-88	10.1	20	01-Oct-02	28.8	34
14-Oct-07	07-Oct-81	9.5	40	12-Oct-88	4.6	24
21-Oct-07	17-Oct-75	7.8	15	20-Oct-74	2.2	27
28-Oct-07	29-Oct-83	5.6	25	26-Oct-79	2.5	27
04-Nov-07	30-Oct-92	4.0	10	07-Nov-93	2.6	26
11-Nov-07	11-Nov-79	3.8	16	12-Nov-95	0.5	34
18-Nov-07	26-Nov-75	0.6	7	20-Nov-78	-3.6	12
25-Nov-07	19-Nov-84	-1.6	17	21-Nov-87	-8.0	23
02-Dec-07	26-Nov-85	0.2	17	29-Nov-76	-6.1	32
09-Dec-07	28-Dec-78	-5.8	2	15-Dec-89	-8.5	18
16-Dec-07	27-Dec-78	-3.4	30	24-Dec-89	-9.1	26
23-Dec-07	25-Dec-90	-4.0	31	26-Dec-83	-12.9	29
30-Dec-07	17-Dec-79	-7.3	25	26-Dec-93	-17.0	33

### 3.4 Conservation and Demand Response

Conservation has occurred throughout the history used to forecast energy and peak demand. Over time, less efficient appliances are replaced by more efficient ones, homes and buildings with better insulation replace older structures and businesses alter their operations to reduce their exposure to higher electricity prices. All of these have been occurring naturally and as such are reflected in the demand forecast.

Higher levels of conservation or demand management are possible but require more direct intervention in the form of incentives, standards or other mechanisms. The results of these initiatives can be substantial. There are some initiatives that will start having an impact this summer. However, this demand forecast contains only the element of naturally evolving conservation – which is growing through time – but does not take into account new or evolving programs.

- End of Section -



## 4.0 Demand Forecast

This section presents information on the total system; more detailed information for the individual zones can be found in Appendices A and B.

The weekly energy demand forecast is illustrated in Figure 4.1. Evident from the graph are the following:

- There is a seasonal pattern in energy demand. Winter energy demand is higher and longer than the other seasons. Summer energy demand is shorter and smaller than the winter season.
- The week of Christmas vacation bisects the winter demand.
- The range of possible outcomes in the forecast is illustrated by the band of colour. The range is based on load forecast uncertainty.

Figure 4.1: Weekly Energy Demand – History and Forecast

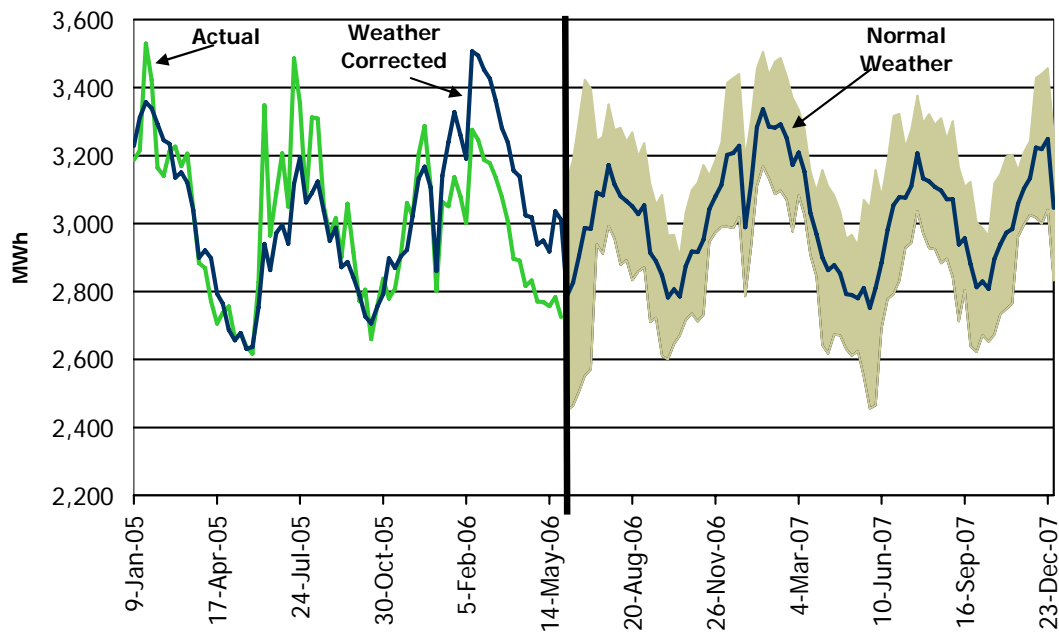


Figure 4.2 shows the range of weekly peak demands. The items of note for this graph are:

- The forecast range is generated using the Extreme weather scenario for the upper bound and the Mild weather scenario for the lower bound.
- The middle of the range represents the Monthly Normal weather peak demand.
- In general, the top half of the range is the focus of the analysis in the resource and transmission assessments. The resource adequacy assessments take into consideration the full range of possible weather conditions on a probabilistic basis for each week. Allowance for the probability of demand being higher than that under normal weather is made in the calculation of the required reserve.

Figure 4.2: Weekly Peak Demand Forecast – History and Forecast

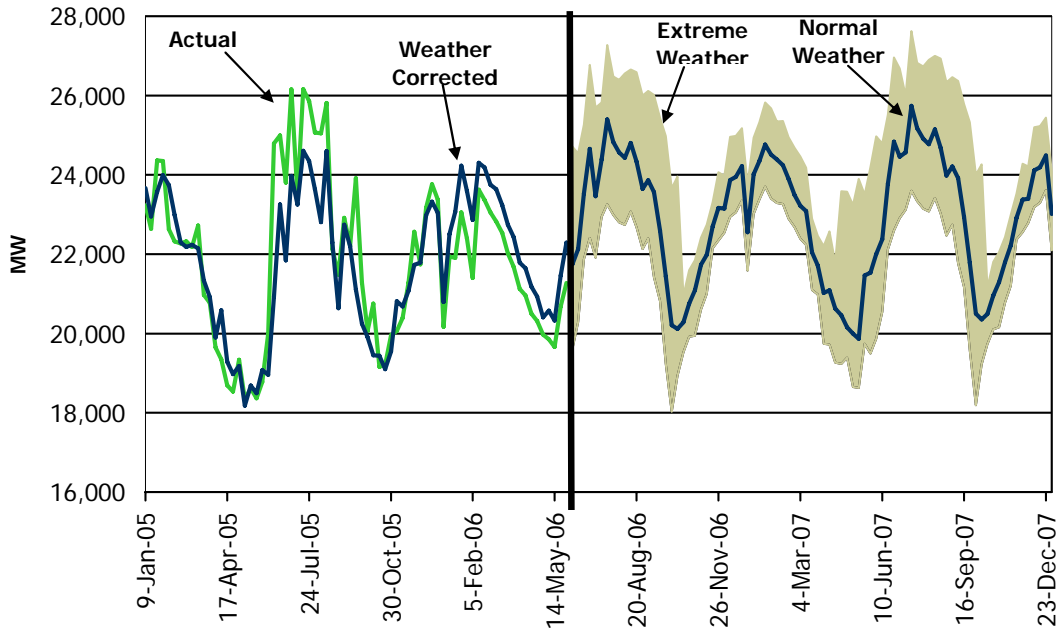
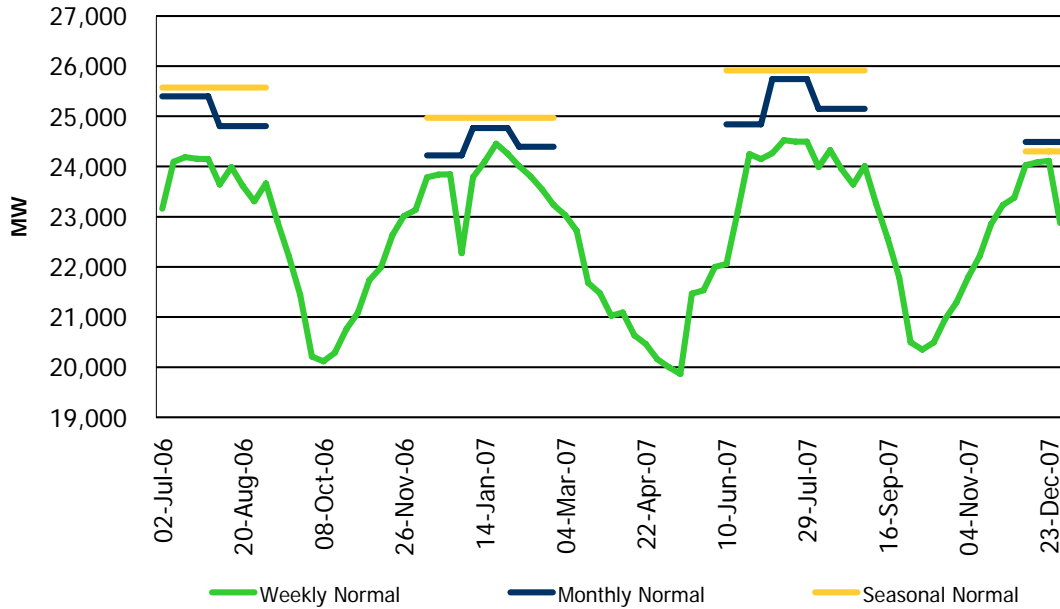


Figure 4.3 shows the difference in the forecasted peaks demands when different weather normalizations are used.

Figure 4.3: Weekly Peak Demand Forecast – Different Weather Normalizations



The Weekly Normal peak demands are the lowest, the Monthly Normal peak demands are higher and the Seasonal Normal peaks are slightly higher still.

Table 4.1 contains the weekly forecast of energy and peak demand. The table includes the Monthly Normal weather peak day temperature for Toronto, Weekly Normal peak demands, Monthly Normal peak demands, Seasonal Normal peak demands, Extreme weather peak demands and Monthly Normal energy demand. For the shoulder periods we have used weekly normalized weather as it delivers a smoother profile during the time of the year when the system is moving from either cooling to heating load or heating to cooling. Monthly and seasonal weather is more appropriate for the winter and summer as that is when capacity concerns are greatest.

Demand values in the table are prior to any price response as price responsive demand is treated as a resource in the reliability assessment. It is reasonable to assume that some level of price responsive demand would reduce consumption in an extreme weather event. Under those circumstances we might see actual demand at a level lower than expected as loads are dispatched off and other price responsive demands curb their consumption.

**Table 4.1: Forecasted Ontario Weekly Demand**

Week Number	Week Ending	Monthly Normal Peak Day Temperature (°C)	Weekly Normal Peak Demand (MW)	Monthly Normal Peak Demand (MW)	Seasonal Normal Peak Demand (MW)	Extreme Peak Demand (MW)	Weekly Normal Energy (GWh)
27	09-Jul-06	30.2	24,093	24,390	24,727	25,825	3,091
28	16-Jul-06	30.2	24,182	25,397	25,573	27,278	3,083
29	23-Jul-06	30.7	24,152	24,829	25,109	26,479	3,172
30	30-Jul-06	30.6	24,151	24,571	24,871	26,392	3,115
31	06-Aug-06	28.9	23,644	24,430	24,146	26,556	3,080
32	13-Aug-06	30.8	23,986	24,805	24,465	26,658	3,066
33	20-Aug-06	30.3	23,609	24,340	24,078	26,593	3,051
34	27-Aug-06	28.6	23,306	23,648	23,792	26,000	3,028
35	03-Sep-06	27.5	23,664	23,863	24,020	26,113	3,054
36	10-Sep-06	27.4	22,910	23,567	23,427	26,020	2,914
37	17-Sep-06	27.5	22,213	22,591	22,591	25,441	2,889
38	24-Sep-06	26.1	21,439			24,975	2,847
39	01-Oct-06	19.5	20,211			23,658	2,783
40	08-Oct-06	10.1	20,116			23,959	2,806
41	15-Oct-06	9.5	20,284			20,953	2,785
42	22-Oct-06	7.8	20,758			21,597	2,874
43	29-Oct-06	5.6	21,089			21,848	2,917
44	05-Nov-06	4.0	21,734			22,418	2,916
45	12-Nov-06	3.8	21,988			22,743	2,952
46	19-Nov-06	0.6	22,635	22,699	22,605	23,313	3,043
47	26-Nov-06	-1.6	23,014	23,163	23,067	24,065	3,080
48	03-Dec-06	0.2	23,136	23,156	23,175	23,973	3,114
49	10-Dec-06	-5.8	23,784	23,872	23,840	24,958	3,202
50	17-Dec-06	-3.4	23,841	23,949	24,013	24,986	3,207
51	24-Dec-06	-4.0	23,845	24,220	24,033	25,175	3,229
52	31-Dec-06	-7.3	22,273	22,555	22,498	23,778	2,989

(Table 4.1 continued)

Week Number	Week Ending	Monthly Normal Peak Day Temperature (°C)	Weekly Normal Peak Demand (MW)	Monthly Normal Peak Demand (MW)	Seasonal Normal Peak Demand (MW)	Extreme Peak Demand (MW)	Weekly Normal Energy (GWh)
1	07-Jan-07	-4.2	23,784	24,016	24,139	24,938	3,118
2	14-Jan-07	-5.6	24,101	24,350	24,554	25,329	3,283
3	21-Jan-07	-11.9	24,455	24,768	24,973	25,826	3,337
4	28-Jan-07	-16.1	24,254	24,512	24,656	25,678	3,285
5	04-Feb-07	-13.5	24,009	24,392	24,460	25,344	3,282
6	11-Feb-07	-13.5	23,801	24,243	24,202	25,359	3,292
7	18-Feb-07	-7.1	23,538	23,905	23,743	24,949	3,252
8	25-Feb-07	-6.5	23,231	23,486	23,449	24,681	3,173
9	04-Mar-07	-8.0	23,030	23,216	23,248	24,463	3,209
10	11-Mar-07	-8.0	22,719	23,089	22,874	24,179	3,152
11	18-Mar-07	-3.9	21,679	22,048	21,772	22,893	3,032
12	25-Mar-07	0.0	21,477	21,714	21,559	22,460	2,969
13	01-Apr-07	1.2	21,025	Peak forecasts for the spring and fall will continue to be based on Weekly Normal Weather		22,205	2,900
14	08-Apr-07	0.2	21,090			22,574	2,863
15	15-Apr-07	5.3	20,632			21,791	2,878
16	22-Apr-07	3.4	20,461			23,588	2,853
17	29-Apr-07	7.1	20,159			23,573	2,792
18	06-May-07	8.6	19,997			23,240	2,789
19	13-May-07	11.4	19,863			23,895	2,780
20	20-May-07	23.4	21,465			23,504	2,810
21	27-May-07	24.8	21,533			24,191	2,751
22	03-Jun-07	27.2	22,000			24,970	2,811
23	10-Jun-07	25.7	22,054	22,377	22,256	24,794	2,884
24	17-Jun-07	29.5	23,108	23,770	23,479	25,514	2,981
25	24-Jun-07	29.3	24,247	24,837	24,790	26,959	3,055
26	01-Jul-07	34.0	24,151	24,457	24,585	26,685	3,077
27	08-Jul-07	30.2	24,268	24,565	24,902	26,001	3,076
28	15-Jul-07	30.2	24,526	25,741	25,916	27,622	3,110
29	22-Jul-07	30.7	24,496	25,172	25,452	26,822	3,206
30	29-Jul-07	30.6	24,494	24,914	25,215	26,735	3,133
31	05-Aug-07	28.9	23,985	24,771	24,487	26,897	3,125
32	12-Aug-07	30.8	24,328	25,146	24,806	26,999	3,108
33	19-Aug-07	30.3	23,951	24,682	24,420	26,934	3,096
34	26-Aug-07	28.6	23,641	23,983	24,126	26,335	3,072
35	02-Sep-07	27.5	24,013	24,212	24,369	26,463	3,071
36	09-Sep-07	27.4	23,259	23,917	23,777	26,370	2,939
37	16-Sep-07	27.5	22,562	22,939	22,939	25,789	2,957
38	23-Sep-07	26.1	21,785	Peak forecasts for the spring and fall will continue to be based on Weekly Normal Weather		25,323	2,881
39	30-Sep-07	19.5	20,498			24,004	2,813
40	07-Oct-07	10.1	20,351			24,264	2,829
41	14-Oct-07	9.5	20,490			21,159	2,808
42	21-Oct-07	7.8	20,960			21,807	2,896
43	28-Oct-07	5.6	21,295			22,054	2,939
44	04-Nov-07	4.0	21,799			22,430	2,973
45	11-Nov-07	3.8	22,218			22,985	2,983
46	18-Nov-07	0.6	22,850	22,914	22,819	23,528	3,058
47	25-Nov-07	-1.6	23,228	23,378	23,282	24,280	3,103
48	02-Dec-07	0.2	23,378	23,398	23,417	24,215	3,134
49	09-Dec-07	-5.8	24,026	24,114	24,082	25,200	3,223
50	16-Dec-07	-3.4	24,083	24,191	24,254	25,228	3,219
51	23-Dec-07	-4.0	24,114	24,489	24,302	25,444	3,249
52	30-Dec-07	-7.3	22,869	23,015	22,996	24,091	3,046

#### 4.1 Load Duration Curves – Summer 2006

The load duration curves are useful as they tie together the peak and energy demands, and give a sense of the distribution of hourly demands.

For the purpose of this forecast analysis, the summer includes the month of September (spanning the period June 1<sup>st</sup>, 2006 to September 30<sup>th</sup>, 2006). For this load duration curve analysis, we are presenting the demand values under the three normalization periods – weekly, monthly and seasonal. For comparison purposes, we have included the actual demand from the summer of 2005. The summer of 2005 had the highest average temperature.

Figure 4.4 shows the highest 5% of hourly demand under the Weekly Normal, Monthly Normal and Seasonal Normalized demand forecasts. The Monthly and Seasonal Normal demand forecasts give higher peak demands than the Weekly Normal as is expected. As well, the

Monthly and Seasonal Normal demand forecasts are very similar. The actuals reflect the record temperatures.

Figure 4.4: Load Duration Curve - Summer 2006

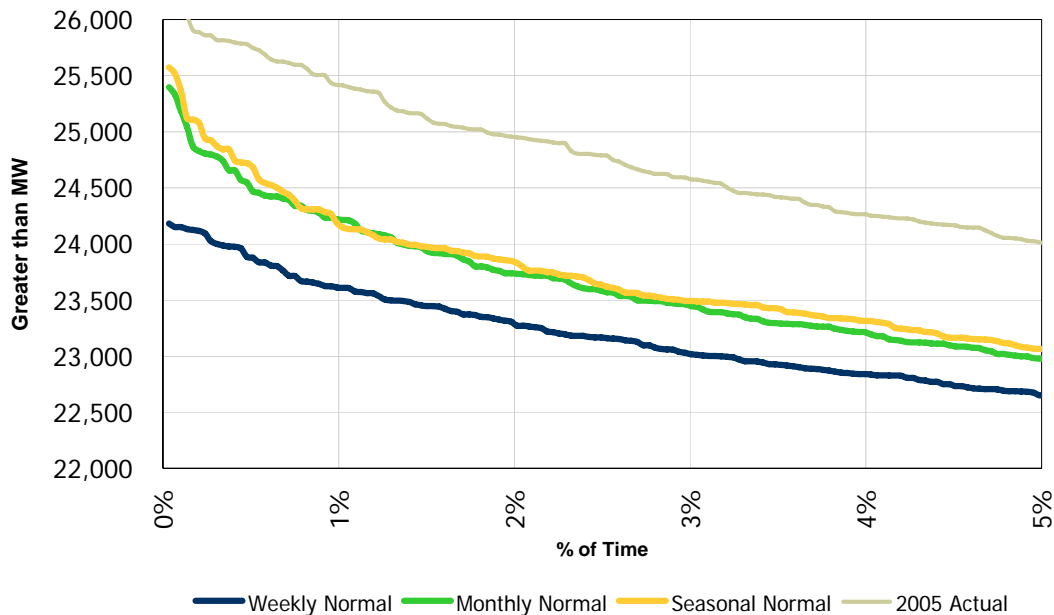


Table 4.2 shows the summary statistics for the summer of 2006 under the various weather scenarios. The table has the maximum, minimum and average demand for the summer. As well, it shows the demand level at the 90<sup>th</sup> percentile and the percent and number of hours above 23,000 MW.

Table 4.2: Summary Statistics - Summer 2006

Summer 2006 (June 1st to September 30th)	Weekly Normal	Monthly Normal	Seasonal Normal	2005 Actual
Maximum Hour (MW)	24,182	25,397	25,573	26,160
Average Hour (MW)	17,693	17,798	17,780	18,503
Minimum Hour (MW)	11,512	11,684	11,380	12,066
Standard Deviation (MW)	3,111	3,197	3,205	3,123
90th Percentile (MW)	21,956	22,229	22,295	22,863
Percent above 23,000 MW	3.2%	4.9%	5.3%	9.6%
# of Hours Above 23,000 MW	94	143	155	281

#### 4.2 Load Duration Curves - Winter 2006-07

This section looks at the duration curves for the winter of 2006-07 (November 1<sup>st</sup> 2006 to March 31<sup>st</sup> 2007). As with the summer analysis we will compare the demand under the three normalization periods (weekly, monthly and seasonal) with the actuals from this past winter (2005-06).

Figure 4.5 shows the highest 5% of hourly demand under the Weekly Normal, Monthly Normal, Seasonal Normal and 2005-06 actuals. Of note in this graph is the fact that the Normal weather curves are all relatively close. This is due to the fact that the system is much less sensitive to cold temperature changes than hot temperature changes. The actuals for this past winter are quite low as January was the mildest on record.

Figure 4.5: Load Duration Curve - Winter 2006-07

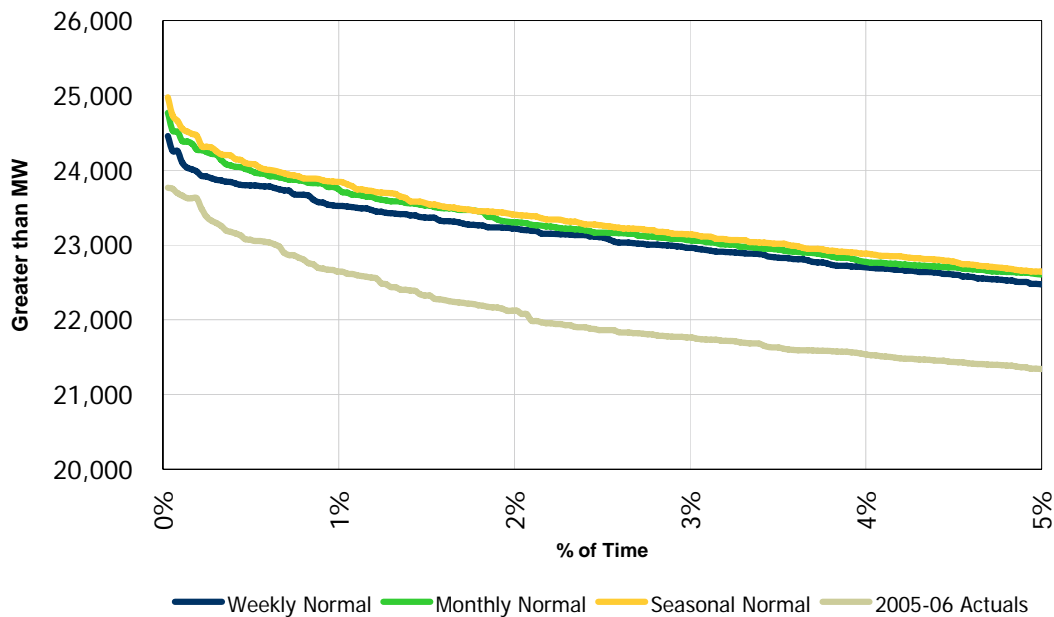


Table 4.3 shows the summary statistics for the winter of 2006-07 under the various weather scenarios. The table has the maximum, minimum and average demand for the winter. As well, it shows the demand level at the 90<sup>th</sup> percentile and the percent and number of hours above 23,000 MW. It is important to note that there is an upward bias in the numbers as peak eliciting weather is always placed mid-week to avoid holidays and weekends. In reality, the coldest weather of any week has a 2 in 7 chance of occurring on a weekend and therefore having a lower demand impact.

Table 4.3: Summary Statistics - Winter 2006-07

Winter 2006-07 (November 1st to March 31st)	Weekly Normal	Monthly Normal	Seasonal Normal	2005-06 Actuals
Maximum Hour (MW)	24,455	24,768	24,973	23,766
Average Hour (MW)	18,695	18,704	18,738	18,088
Minimum Hour (MW)	12,418	12,418	12,418	12,548
Standard Deviation (MW)	2,542	2,591	2,604	2,224
90th Percentile (MW)	21,760	21,883	21,931	20,799
Percent above 23,000 MW	2.8%	3.3%	3.6%	0.7%
# of Hours Above 23,000 MW	101	120	130	25

### 4.3 Long-Term Demand Forecast

In addition to producing a forecast of demand for the 18-Month Outlook, a demand forecast was also produced for the Ontario Reliability Outlook (ORO). Both outlooks use a consistent methodology and approach. Whereas the 18-Month Outlook uses Monthly normal weather to generate summer and winter peak demands, the ORO uses Seasonal normal weather for the summer and winter peak demands. This approach is consistent with the needs and purposes of the two reports. The ORO focuses on capacity planning and long-term requirements. The 18-Month allows for the inclusion of operational actions of a temporary nature to ensure reliability. Table 4.4 shows the main components of the demand forecast for the ORO that are not covered in the 18-Month time frame.

**Table 4.4: Summary of Long-Term Demand Forecast**

Year	Energy Demand (GWh)	Normal Summer Peak Demand (MW)	Extreme Summer Peak Demand (MW)	Normal Winter Peak Demand (MW)	Extreme Winter Peak Demand (MW)
2008	160,011	26,263	27,968	25,226	26,079
2009	160,981	26,675	28,380	25,486	26,339
2010	162,545	26,973	28,678	25,690	26,543
2011	164,331	27,337	29,042	25,960	26,813
2012	166,333	27,697	29,403	26,238	27,091

### 4.4 Comparison of Current and Previous Forecast

This section compares the current forecast with that released December 22, 2005.

The biggest change is due to the inclusion of actuals and the impact on the relationship between demand and economic factors.

Table 4.5 shows the difference between the current and previous forecast for the seasons common to both forecasts. A slightly weaker economy shows through in the energy demand numbers. However, the change from weekly normalization to monthly normalization has a large impact on peak demands, most notably in the summer and fall (September).

Table 4.5: Current versus Previous Forecast

Season	Energy Demand	Monthly Normal Peak Demand	Extreme Weather Peak Demand
	(GWh)	(MW)	(MW)
Summer 2006	39,771	25,397	27,278
Difference (Current - Previous)	-205	-105	-101
Fall 2006	24,862	23,567	26,020
Difference (Current - Previous)	-72	-98	-98
Winter 2006-07	67,750	24,768	25,826
Difference (Current - Previous)	-222	-129	-137
Spring 2007	24,548	22,000	24,970
Difference (Current - Previous)	-67	-109	-108
Summer 2007	40,120	25,741	27,622
Difference (Current - Previous)	-350	-117	-114

- End of Section -



## Appendix A Energy Demand Forecast Details

**Table A1: Weekly Zonal Energy Forecast, Weekly Normal Weather**

Week Ending	Weekly Normal Energy (GWh)										
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	Total System
09-Jul-06	141	210	215	142	222	1,072	115	7	614	351	3,091
16-Jul-06	141	207	227	133	222	1,064	116	7	608	358	3,083
23-Jul-06	142	212	234	135	228	1,102	120	6	612	380	3,172
30-Jul-06	144	209	223	147	227	1,073	118	6	591	378	3,115
06-Aug-06	144	213	215	138	228	1,053	117	6	590	376	3,080
13-Aug-06	145	219	211	137	225	1,046	116	7	589	370	3,066
20-Aug-06	145	226	207	140	222	1,031	115	6	589	367	3,051
27-Aug-06	146	232	195	148	215	1,022	113	7	589	361	3,028
03-Sep-06	144	238	200	148	219	1,029	113	7	597	360	3,054
10-Sep-06	139	232	191	132	213	973	108	7	573	347	2,914
17-Sep-06	141	230	183	124	210	966	110	7	568	349	2,889
24-Sep-06	142	227	191	108	211	955	106	7	565	335	2,847
01-Oct-06	142	226	184	108	214	925	104	7	553	321	2,783
08-Oct-06	143	233	186	120	215	923	104	8	553	322	2,806
15-Oct-06	145	236	182	133	214	905	103	8	543	316	2,785
22-Oct-06	147	244	170	163	222	927	107	8	563	324	2,874
29-Oct-06	150	248	180	171	221	934	108	8	573	325	2,917
05-Nov-06	150	247	156	173	223	941	108	9	581	328	2,916
12-Nov-06	154	249	193	152	225	948	109	9	582	331	2,952
19-Nov-06	155	252	208	157	234	983	111	9	597	337	3,043
26-Nov-06	155	255	221	159	235	995	111	9	601	338	3,080
03-Dec-06	158	258	236	157	237	1,003	112	10	603	341	3,114
10-Dec-06	158	263	242	167	251	1,031	114	10	617	350	3,202
17-Dec-06	158	264	237	172	249	1,033	114	10	619	351	3,207
24-Dec-06	161	263	263	161	250	1,035	115	10	623	351	3,229
31-Dec-06	140	245	234	172	244	944	98	10	581	320	2,989
07-Jan-07	156	261	243	170	242	985	109	9	605	338	3,118
14-Jan-07	162	273	253	176	262	1,041	116	10	636	355	3,283
21-Jan-07	165	275	267	175	266	1,058	117	10	646	359	3,337
28-Jan-07	162	272	245	184	261	1,043	115	10	639	353	3,285
04-Feb-07	165	268	265	167	250	1,043	116	10	642	356	3,282
11-Feb-07	161	264	263	170	250	1,052	116	10	649	357	3,292
18-Feb-07	160	267	245	177	252	1,036	115	10	638	352	3,252
25-Feb-07	160	256	240	171	242	1,014	113	10	621	345	3,173
04-Mar-07	158	262	233	176	248	1,034	114	10	626	347	3,209
11-Mar-07	157	260	255	152	240	1,006	113	10	614	345	3,152
18-Mar-07	150	242	230	135	233	986	110	9	603	335	3,032
25-Mar-07	149	243	226	133	231	956	107	9	588	326	2,969
01-Apr-07	148	235	205	132	217	938	108	9	580	328	2,900

(Table A1 continued)

Week Ending	Weekly Normal Energy (GWh)										
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	Total System
08-Apr-07	148	237	203	135	214	918	105	9	572	323	2,863
15-Apr-07	146	240	181	159	215	921	107	9	574	326	2,878
22-Apr-07	146	233	184	157	208	920	106	8	566	325	2,853
29-Apr-07	147	224	155	170	201	905	105	8	560	319	2,792
06-May-07	144	219	158	168	204	908	104	7	560	315	2,789
13-May-07	143	220	156	167	203	903	104	7	554	322	2,780
20-May-07	142	219	171	159	204	927	105	6	553	324	2,810
27-May-07	142	220	176	153	199	901	101	7	539	313	2,751
03-Jun-07	141	218	183	152	205	925	104	6	555	322	2,811
10-Jun-07	144	213	196	136	203	962	108	6	570	346	2,884
17-Jun-07	147	213	212	132	210	1,003	111	7	590	356	2,981
24-Jun-07	148	211	206	147	221	1,039	112	7	608	354	3,055
01-Jul-07	144	205	210	142	221	1,062	116	8	616	353	3,077
08-Jul-07	137	210	226	133	215	1,053	115	7	617	363	3,076
15-Jul-07	143	210	232	138	226	1,065	115	7	615	360	3,110
22-Jul-07	143	212	239	139	230	1,113	119	7	624	380	3,206
29-Jul-07	144	213	220	144	224	1,081	118	6	601	382	3,133
05-Aug-07	146	215	227	142	233	1,071	114	7	601	370	3,125
12-Aug-07	146	220	211	139	223	1,061	118	7	601	383	3,108
19-Aug-07	145	225	212	144	225	1,046	117	7	599	377	3,096
26-Aug-07	148	232	202	147	221	1,031	115	7	600	369	3,072
02-Sep-07	145	241	204	154	224	1,021	112	7	602	361	3,071
09-Sep-07	140	232	192	136	215	980	107	7	583	347	2,939
16-Sep-07	142	231	196	125	213	990	111	7	582	359	2,957
23-Sep-07	142	230	194	111	213	963	107	7	574	340	2,881
30-Sep-07	142	228	186	111	217	932	104	7	561	325	2,813
07-Oct-07	143	233	190	119	218	928	104	8	561	326	2,829
14-Oct-07	145	237	186	132	217	909	103	8	550	320	2,808
21-Oct-07	147	245	174	163	225	931	107	8	570	328	2,896
28-Oct-07	150	249	183	170	224	938	108	8	580	329	2,939
04-Nov-07	149	256	160	203	228	947	108	8	586	328	2,973
11-Nov-07	154	252	192	157	228	954	109	9	592	336	2,983
18-Nov-07	155	253	212	157	236	983	110	9	602	340	3,058
25-Nov-07	156	257	222	160	238	999	111	10	609	342	3,103
02-Dec-07	158	259	236	159	238	1,007	112	10	610	345	3,134
09-Dec-07	158	268	233	174	254	1,034	114	10	624	353	3,223
16-Dec-07	159	260	253	164	247	1,032	115	10	624	355	3,219
23-Dec-07	159	263	250	172	253	1,043	115	10	631	355	3,249
30-Dec-07	142	253	240	171	253	956	100	10	592	328	3,046

- End of Section -

## Appendix B Peak Demand Forecast Details

**Table B1: Weekly Zonal Coincident Peak Demand Forecast, Monthly Normal Weather**

Week Ending	Hourly Coincident Peak Demand (MW)											
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	Total System	Load Forecast Uncertainty
09-Jul-06	872	1,356	1,743	1,059	1,711	9,049	886	52	4,891	2,771	24,390	723
16-Jul-06	866	1,363	1,985	1,176	1,844	9,190	975	52	4,858	3,089	25,397	1,071
23-Jul-06	887	1,368	1,807	1,046	1,699	9,227	935	47	4,811	3,001	24,829	919
30-Jul-06	907	1,340	1,794	1,139	1,721	8,995	931	49	4,656	3,038	24,571	883
06-Aug-06	891	1,450	1,804	1,096	1,833	8,772	926	46	4,583	3,029	24,430	845
13-Aug-06	916	1,409	1,815	1,086	1,792	9,005	941	49	4,731	3,061	24,805	865
20-Aug-06	906	1,484	1,742	1,086	1,739	8,905	887	47	4,660	2,885	24,340	830
27-Aug-06	878	1,473	1,584	1,124	1,594	8,575	897	49	4,555	2,919	23,648	758
03-Sep-06	889	1,531	1,671	1,174	1,706	8,506	890	50	4,555	2,891	23,863	734
10-Sep-06	891	1,507	1,620	963	1,688	8,394	927	48	4,515	3,015	23,567	1,072
17-Sep-06	873	1,470	1,565	994	1,564	8,249	816	49	4,359	2,652	22,591	886
24-Sep-06	905	1,457	1,404	811	1,488	7,694	823	45	4,154	2,659	21,439	1,102
01-Oct-06	863	1,421	1,362	854	1,604	7,066	723	52	3,982	2,283	20,211	1,093
08-Oct-06	876	1,472	1,581	804	1,646	6,749	735	54	3,970	2,229	20,116	592
15-Oct-06	853	1,533	1,621	881	1,622	6,760	745	55	3,984	2,230	20,284	380
22-Oct-06	870	1,530	1,410	1,149	1,661	6,953	764	55	4,080	2,285	20,758	419
29-Oct-06	888	1,644	1,499	1,207	1,702	6,941	763	56	4,126	2,264	21,089	571
05-Nov-06	917	1,601	1,393	1,272	1,724	7,277	784	64	4,320	2,383	21,734	566
12-Nov-06	942	1,592	1,571	1,198	1,733	7,332	796	64	4,352	2,408	21,988	496
19-Nov-06	950	1,700	1,751	1,226	1,838	7,476	809	63	4,405	2,481	22,699	273
26-Nov-06	956	1,657	1,819	1,268	1,856	7,654	833	67	4,525	2,528	23,163	411
03-Dec-06	993	1,743	1,930	1,092	1,879	7,742	799	68	4,499	2,411	23,156	308
10-Dec-06	1,004	1,756	1,932	1,359	1,976	7,817	843	69	4,578	2,537	23,872	466
17-Dec-06	991	1,743	2,147	1,251	1,928	7,788	854	70	4,606	2,571	23,949	447
24-Dec-06	1,049	1,797	2,107	1,096	1,917	8,034	847	69	4,699	2,606	24,220	436
31-Dec-06	908	1,647	2,060	1,336	1,944	7,127	758	68	4,408	2,299	22,555	485
07-Jan-07	976	1,698	2,271	1,374	1,967	7,706	816	64	4,657	2,486	24,016	502
14-Jan-07	996	1,727	2,146	1,323	2,066	7,901	843	66	4,698	2,583	24,350	486
21-Jan-07	1,005	1,806	2,180	1,345	2,107	8,073	839	67	4,776	2,571	24,768	532
28-Jan-07	988	1,841	2,140	1,318	2,088	7,979	830	67	4,741	2,520	24,512	556
04-Feb-07	980	1,773	2,467	1,092	1,940	7,976	825	69	4,761	2,508	24,392	550
11-Feb-07	968	1,704	2,348	1,111	1,896	7,955	841	70	4,747	2,603	24,243	489
18-Feb-07	985	1,692	2,055	1,227	1,951	7,896	821	70	4,679	2,529	23,905	503
25-Feb-07	966	1,670	2,186	1,076	1,868	7,767	810	70	4,596	2,477	23,486	403
04-Mar-07	940	1,619	2,005	1,229	1,905	7,701	812	68	4,494	2,444	23,216	415
11-Mar-07	911	1,607	2,415	960	1,809	7,622	807	69	4,474	2,415	23,089	431
18-Mar-07	900	1,539	2,038	909	1,849	7,298	779	60	4,328	2,347	22,048	476
25-Mar-07	926	1,526	2,337	723	1,872	7,041	764	59	4,170	2,297	21,714	365
01-Apr-07	899	1,523	1,738	869	1,721	6,987	768	59	4,147	2,315	21,025	642

(Table B1 continued)

Week Ending	Hourly Coincident Peak Demand (MW)											
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	Total System	Load Forecast Uncertainty
08-Apr-07	887	1,476	2,034	711	1,686	6,989	764	61	4,173	2,308	21,090	684
15-Apr-07	908	1,483	1,428	1,002	1,607	6,887	772	58	4,118	2,369	20,632	683
22-Apr-07	883	1,510	1,653	919	1,603	6,775	738	56	4,080	2,243	20,461	613
29-Apr-07	923	1,427	1,336	1,131	1,378	6,940	723	52	4,000	2,249	20,159	383
06-May-07	883	1,409	1,449	1,043	1,591	6,599	748	51	4,022	2,202	19,997	670
13-May-07	940	1,436	958	1,426	1,389	6,716	728	48	3,975	2,246	19,863	616
20-May-07	893	1,431	1,404	1,172	1,504	7,507	822	41	4,034	2,657	21,465	861
27-May-07	868	1,417	1,449	1,159	1,473	7,761	776	44	4,075	2,511	21,533	1,018
03-Jun-07	871	1,389	1,522	1,122	1,492	7,941	809	45	4,172	2,636	22,000	1,067
10-Jun-07	895	1,395	1,536	974	1,484	8,132	833	44	4,356	2,729	22,377	916
17-Jun-07	912	1,420	1,747	1,071	1,597	8,675	860	50	4,628	2,810	23,770	827
24-Jun-07	908	1,369	1,817	1,152	1,720	9,015	940	52	4,822	3,042	24,837	1,123
01-Jul-07	907	1,314	1,672	1,183	1,578	9,149	921	52	4,807	2,873	24,457	775
08-Jul-07	845	1,367	1,892	955	1,667	9,077	892	56	4,949	2,867	24,565	723
15-Jul-07	872	1,376	2,025	1,177	1,865	9,312	980	54	4,946	3,134	25,741	1,071
22-Jul-07	893	1,381	1,846	1,047	1,718	9,351	941	49	4,899	3,046	25,172	919
29-Jul-07	914	1,357	1,833	1,140	1,741	9,118	937	51	4,741	3,083	24,914	883
05-Aug-07	897	1,474	1,839	1,104	1,853	8,888	931	48	4,665	3,073	24,771	845
12-Aug-07	923	1,423	1,850	1,098	1,812	9,123	946	51	4,814	3,107	25,146	865
19-Aug-07	913	1,498	1,778	1,094	1,759	9,026	892	49	4,743	2,930	24,682	830
26-Aug-07	883	1,483	1,621	1,130	1,613	8,696	902	51	4,640	2,964	23,983	758
02-Sep-07	897	1,543	1,704	1,191	1,726	8,626	895	52	4,640	2,938	24,212	734
09-Sep-07	895	1,530	1,650	984	1,705	8,507	932	49	4,603	3,060	23,917	1,072
16-Sep-07	875	1,492	1,597	1,011	1,582	8,365	821	51	4,449	2,696	22,939	886
23-Sep-07	913	1,477	1,435	824	1,504	7,811	828	47	4,243	2,705	21,785	1,104
30-Sep-07	863	1,440	1,390	863	1,623	7,160	727	54	4,058	2,320	20,498	1,152
07-Oct-07	886	1,464	1,439	862	1,582	6,980	709	52	4,017	2,360	20,351	564
14-Oct-07	850	1,538	1,652	870	1,652	6,817	748	58	4,043	2,262	20,490	380
21-Oct-07	867	1,537	1,441	1,135	1,691	7,013	767	58	4,136	2,315	20,960	427
28-Oct-07	885	1,650	1,529	1,197	1,731	6,996	767	58	4,186	2,295	21,295	571
04-Nov-07	909	1,664	1,386	1,411	1,746	7,220	778	59	4,291	2,335	21,799	513
11-Nov-07	940	1,606	1,593	1,202	1,760	7,394	801	66	4,416	2,440	22,218	508
18-Nov-07	947	1,712	1,766	1,234	1,868	7,531	813	66	4,466	2,512	22,914	273
25-Nov-07	953	1,668	1,834	1,276	1,886	7,710	837	69	4,586	2,559	23,378	411
02-Dec-07	993	1,758	1,954	1,103	1,904	7,805	803	70	4,565	2,443	23,398	308
09-Dec-07	1,002	1,767	1,957	1,368	2,006	7,883	848	71	4,642	2,570	24,114	466
16-Dec-07	989	1,754	2,173	1,259	1,958	7,854	859	72	4,669	2,603	24,191	447
23-Dec-07	1,007	1,750	2,329	1,231	1,951	7,960	857	72	4,727	2,605	24,489	436
30-Dec-07	942	1,746	1,878	1,255	1,930	7,442	779	73	4,508	2,461	23,015	459

Table B2: Weekly Zonal Non-Coincident Peak Demand Forecast, Monthly Normal Weather

Week	Hourly Non-Coincident Peak Demand (MW)											Zonal Total
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	System	
09-Jul-06	940	1,417	1,942	1,285	1,727	9,049	902	56	4,891	2,833	24,390	25,042
16-Jul-06	926	1,420	2,268	1,193	1,853	9,190	979	53	4,861	3,089	25,397	25,832
23-Jul-06	927	1,447	2,023	1,164	1,726	9,227	942	48	4,811	3,012	24,829	25,327
30-Jul-06	957	1,423	2,001	1,278	1,742	8,995	937	49	4,674	3,041	24,571	25,097
06-Aug-06	971	1,457	1,984	1,187	1,855	8,772	931	49	4,599	3,031	24,430	24,836
13-Aug-06	961	1,487	2,005	1,188	1,812	9,005	947	54	4,739	3,071	24,805	25,269
20-Aug-06	968	1,545	1,889	1,182	1,758	8,905	892	50	4,662	2,898	24,340	24,749
27-Aug-06	976	1,593	1,706	1,181	1,615	8,575	898	50	4,564	2,920	23,648	24,078
03-Sep-06	952	1,644	1,826	1,187	1,739	8,506	890	52	4,562	2,891	23,863	24,249
10-Sep-06	940	1,597	1,788	1,067	1,724	8,394	929	53	4,516	3,018	23,567	24,026
17-Sep-06	967	1,594	1,742	1,095	1,607	8,249	891	57	4,359	2,912	22,591	23,473
24-Sep-06	981	1,545	1,556	863	1,595	7,725	828	54	4,176	2,666	21,439	21,989
01-Oct-06	962	1,526	1,581	997	1,649	7,116	726	60	3,986	2,283	20,211	20,886
08-Oct-06	986	1,552	1,662	969	1,656	6,981	738	60	3,970	2,318	20,116	20,892
15-Oct-06	993	1,616	1,676	1,216	1,630	6,775	752	59	3,984	2,239	20,284	20,940
22-Oct-06	979	1,665	1,419	1,293	1,667	6,953	764	59	4,080	2,285	20,758	21,164
29-Oct-06	1,006	1,691	1,503	1,436	1,702	6,941	763	59	4,126	2,264	21,089	21,491
05-Nov-06	1,011	1,707	1,393	1,472	1,724	7,343	784	67	4,321	2,390	21,734	22,212
12-Nov-06	1,047	1,774	1,666	1,234	1,795	7,432	796	66	4,358	2,409	21,988	22,577
19-Nov-06	1,058	1,759	1,751	1,271	1,838	7,595	811	66	4,415	2,504	22,699	23,068
26-Nov-06	1,038	1,864	1,900	1,287	1,856	7,716	833	69	4,525	2,548	23,163	23,636
03-Dec-06	1,051	1,869	2,107	1,308	1,880	7,742	819	69	4,499	2,484	23,156	23,828
10-Dec-06	1,074	1,864	2,046	1,392	1,976	7,907	843	71	4,578	2,572	23,872	24,323
17-Dec-06	1,083	1,835	2,179	1,540	1,928	7,911	854	71	4,626	2,599	23,949	24,626
24-Dec-06	1,108	1,869	2,327	1,359	1,995	8,034	852	69	4,699	2,606	24,220	24,918
31-Dec-06	998	1,815	2,110	1,453	1,944	7,181	775	71	4,408	2,317	22,555	23,072
07-Jan-07	1,063	1,887	2,291	1,527	1,967	7,854	816	66	4,678	2,518	24,016	24,667
14-Jan-07	1,107	1,946	2,156	1,466	2,066	7,950	843	69	4,698	2,597	24,350	24,898
21-Jan-07	1,124	1,902	2,326	1,405	2,107	8,073	839	71	4,776	2,571	24,768	25,194
28-Jan-07	1,119	1,929	2,216	1,557	2,088	7,979	830	72	4,741	2,520	24,512	25,051
04-Feb-07	1,115	1,875	2,561	1,336	1,940	7,976	828	71	4,761	2,551	24,392	25,014
11-Feb-07	1,136	1,784	2,449	1,386	1,936	7,955	841	73	4,747	2,603	24,243	24,910
18-Feb-07	1,116	1,835	2,322	1,416	1,951	7,896	825	74	4,679	2,529	23,905	24,643
25-Feb-07	1,097	1,747	2,322	1,501	1,868	7,767	813	74	4,596	2,477	23,486	24,262
04-Mar-07	1,111	1,824	2,066	1,357	1,905	7,704	812	75	4,494	2,486	23,216	23,834
11-Mar-07	1,083	1,801	2,415	1,178	1,837	7,624	810	74	4,475	2,507	23,089	23,804
18-Mar-07	1,047	1,668	2,038	1,060	1,849	7,298	779	68	4,328	2,354	22,048	22,489
25-Mar-07	1,061	1,711	2,337	1,177	1,872	7,050	764	66	4,213	2,297	21,714	22,548
01-Apr-07	1,025	1,656	1,738	1,119	1,721	6,987	768	67	4,147	2,315	21,025	21,543

(Table B2 continued)

Week	Hourly Non-Coincident Peak Demand (MW)											
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	System	Zonal Total
08-Apr-07	1,049	1,614	2,034	1,173	1,686	6,989	764	67	4,173	2,308	21,090	21,857
15-Apr-07	1,040	1,627	1,628	1,364	1,652	6,887	772	66	4,118	2,369	20,632	21,523
22-Apr-07	1,001	1,562	1,658	1,284	1,610	6,783	755	62	4,080	2,331	20,461	21,126
29-Apr-07	1,018	1,529	1,382	1,425	1,583	6,940	750	62	4,031	2,264	20,159	20,984
06-May-07	990	1,510	1,449	1,404	1,627	6,635	748	59	4,022	2,217	19,997	20,661
13-May-07	966	1,494	1,554	1,426	1,564	6,785	741	55	3,975	2,300	19,863	20,860
20-May-07	968	1,506	1,437	1,381	1,528	7,507	826	56	4,034	2,667	21,465	21,910
27-May-07	985	1,511	1,514	1,285	1,496	7,761	779	62	4,075	2,516	21,533	21,984
03-Jun-07	960	1,516	1,620	1,255	1,512	7,941	809	56	4,172	2,636	22,000	22,477
10-Jun-07	967	1,462	1,632	1,117	1,511	8,132	834	47	4,356	2,733	22,377	22,791
17-Jun-07	992	1,442	1,918	1,096	1,616	8,675	861	51	4,628	2,819	23,770	24,098
24-Jun-07	1,000	1,479	1,988	1,187	1,730	9,015	941	55	4,822	3,045	24,837	25,262
01-Jul-07	960	1,400	1,917	1,213	1,827	9,149	922	57	4,807	2,882	24,457	25,134
08-Jul-07	929	1,438	2,175	1,068	1,694	9,077	905	57	4,949	2,929	24,565	25,221
15-Jul-07	950	1,434	2,309	1,196	1,876	9,312	984	56	4,947	3,134	25,741	26,198
22-Jul-07	945	1,449	2,067	1,167	1,747	9,351	948	51	4,899	3,057	25,172	25,681
29-Jul-07	944	1,446	2,045	1,254	1,765	9,118	942	51	4,758	3,086	24,914	25,409
05-Aug-07	971	1,492	2,023	1,297	1,877	8,888	935	51	4,682	3,075	24,771	25,291
12-Aug-07	981	1,532	2,044	1,190	1,834	9,123	952	53	4,824	3,118	25,146	25,651
19-Aug-07	963	1,554	1,928	1,214	1,781	9,026	897	52	4,746	2,944	24,682	25,105
26-Aug-07	986	1,603	1,747	1,142	1,665	8,696	903	52	4,648	2,965	23,983	24,407
02-Sep-07	971	1,676	1,864	1,219	1,774	8,626	896	54	4,647	2,938	24,212	24,665
09-Sep-07	948	1,587	1,819	1,067	1,750	8,507	935	55	4,603	3,065	23,917	24,336
16-Sep-07	979	1,581	1,780	1,054	1,635	8,365	896	53	4,449	2,959	22,939	23,751
23-Sep-07	988	1,563	1,592	882	1,627	7,839	833	57	4,265	2,711	21,785	22,357
30-Sep-07	972	1,539	1,601	1,025	1,682	7,212	731	62	4,058	2,320	20,498	21,202
07-Oct-07	993	1,561	1,701	961	1,692	7,050	744	62	4,034	2,360	20,351	21,158
14-Oct-07	1,002	1,624	1,716	1,215	1,667	6,832	755	62	4,043	2,269	20,490	21,185
21-Oct-07	987	1,673	1,459	1,292	1,698	7,013	767	62	4,136	2,315	20,960	21,402
28-Oct-07	1,013	1,700	1,541	1,430	1,731	6,996	767	62	4,186	2,295	21,295	21,721
04-Nov-07	1,018	1,714	1,386	1,730	1,746	7,220	778	61	4,291	2,335	21,799	22,279
11-Nov-07	1,052	1,788	1,681	1,262	1,824	7,463	801	69	4,416	2,440	22,218	22,796
18-Nov-07	1,063	1,772	1,766	1,274	1,868	7,625	813	68	4,466	2,527	22,914	23,242
25-Nov-07	1,043	1,873	1,921	1,299	1,886	7,746	837	71	4,586	2,572	23,378	23,834
02-Dec-07	1,055	1,884	2,142	1,326	1,914	7,805	826	72	4,566	2,515	23,398	24,105
09-Dec-07	1,079	1,874	2,074	1,517	2,006	7,927	849	73	4,665	2,574	24,114	24,638
16-Dec-07	1,088	1,876	2,210	1,392	1,958	7,965	859	73	4,680	2,625	24,191	24,726
23-Dec-07	1,112	1,844	2,372	1,458	2,024	8,092	857	72	4,759	2,635	24,489	25,225
30-Dec-07	1,036	1,840	2,139	1,349	1,940	7,442	786	74	4,508	2,461	23,015	23,575

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## Appendix C Analytical Factors

Table C1: Factors Affecting Demand

Factors Affecting Daily Energy Demand				
Variable Class	Variable	Change in Variable	Impact On Daily Energy Demand (MWh)	
Weather	<b>Daily Avg Temperature</b> > 16° C 10° C > and < 16° C < 10° C	1° C Increase	7,470 MWh Increase	
		1° C Increase	540 MWh Increase	
		1° C Decrease	2,750 MWh Increase	
	<b>Daily Humidity - Dewpoint</b> > 16° C 10° C > and < 16° C < 10° C	1° C Increase	2,720 MWh Increase	
		1° C Increase	200 MWh Increase	
		1° C Decrease	1,000 MWh Increase	
	<b>Wind</b>  Summer Winter	1 km/hr Decrease	260 MWh Increase	
		1 km/hr Increase	100 MWh Increase	
	<b>Cloud</b>  Summer Winter	Decrease of 1 on Scale	1,160 MWh Decrease	
		Increase of 1 on Scale	1,440 MWh Increase	
Economic	<b>Employment</b>	Increase of 1,000 jobs	15 MWh Increase	
	<b>Housing Stock</b>	Increase of 1,000 houses	25 MWh Increase	
Calendar	<b>Holidays</b>	New Year's Day	64,000 MWh Decrease	
		Good Friday	45,000 MWh Decrease	
		Victoria Day	53,000 MWh Decrease	
		Canada Day	35,000 MWh Decrease	
		August Civic Holiday	37,000 MWh Decrease	
		Labour Day	56,000 MWh Decrease	
		Thanksgiving Day	55,000 MWh Decrease	
		Remembrance Day	8,000 MWh Decrease	
		Christmas	81,000 MWh Decrease	
		Boxing Day	78,000 MWh Decrease	
		<b>Day of Week</b>	New Year's Eve	9,000 MWh Decrease
			Monday vs Sunday	45,000 MWh Increase
	Tuesday vs Sunday		47,000 MWh Increase	
	Wednesday vs Sunday	47,000 MWh Increase		
	Thursday vs Sunday	47,000 MWh Increase		
Friday vs Sunday	43,000 MWh Increase			
Saturday vs Sunday	11,000 MWh Increase			

(Table C1 continued)

Factors Affecting Daily Peak Demand				
Variable Class	Variable	Change in Variable	Impact On Daily Peak Demand (MW)	
Weather	<b>Temperature</b>			
	> 16° C	1°C Increase	420 MW Increase	
	10°C > and < 16° C	1°C Increase	80 MW Increase	
	< 10°C	1°C Decrease	110 MW Increase	
	<b>Humidity - Dewpoint</b>			
	> 16° C	1°C Increase	150 MW Increase	
	10°C > and < 16° C	1°C Increase	30 MW Increase	
	< 10°C	1°C Decrease	40 MW Increase	
	<b>Wind</b>			
	Summer	1 km/hr Decrease	14 MW Increase	
Winter	1 km/hr Increase	10 MW Increase		
Cloud				
	Summer	Decrease of 1 on Scale	100 MW Increase	
Winter	Increase of 1 on Scale	70 MW Increase		
Economic	<b>Employment</b>	Increase of 1,000 jobs	1 MW Increase	
	<b>Housing Stock</b>	Increase of 1,000 houses	1 MW Increase	
Calendar	<b>Holidays</b>	New Year's Day	2,800 MW Decrease	
		Good Friday	2,100 MW Decrease	
		Victoria Day	2,500 MW Decrease	
		Canada Day	1,600 MW Decrease	
		August Civic Holiday	1,500 MW Decrease	
		Labour Day	2,300 MW Decrease	
		Thanksgiving Day	2,400 MW Decrease	
		Remembrance Day	300 MW Decrease	
		Christmas	4,300 MW Decrease	
		Boxing Day	3,600 MW Decrease	
		New Year's Eve	700 MW Decrease	
		<b>Day of Week</b>	Monday vs Sunday	2,000 MW Increase
			Tuesday vs Sunday	2,000 MW Increase
	Wednesday vs Sunday		2,000 MW Increase	
	Thursday vs Sunday		1,900 MW Increase	
	Friday vs Sunday		1,600 MW Increase	
Saturday vs Sunday	200 MW Increase			

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