

Independent Electricity Market Operator

---

***Ontario Demand Forecast***  
***from October 2002 to March 2004***



This page intentionally left blank

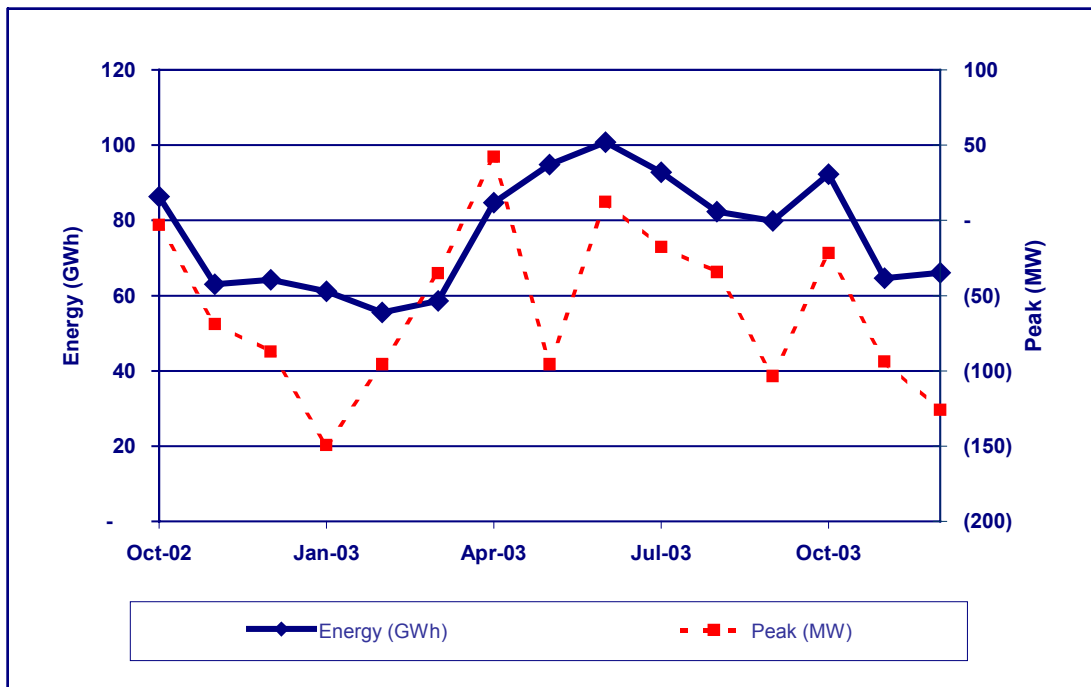
## Executive Summary

This 18-Month forecast is an update to and supercedes the 18-Month demand forecast released June 24, 2002. The most significant difference from the previous forecast document is that the peak demand is now measured over a 60-minute period rather than on a 20-minute basis. This move has been made in order to be consistent with surrounding jurisdictions, which also use a 60-minute peak value. In addition, the forecasting system has been updated to include actual economic, demand and weather data through to the end of June 2002. The economic forecast was also updated to reflect the most current outlook for the Ontario economy. Despite the change to the measure of the peak demand value, the forecasts – both energy and peak demand - are relatively similar to the previous forecast. Higher actual and weather corrected demand values for the second quarter of 2002 and an improved economic outlook have led to an increase in the forecast of energy demand for 2002. Modest growth expectations for 2003 have also increased the energy demand forecast for 2003. The energy demand forecast for 2002 is 149.5 TWh which represents a 1.6% increase over the weather corrected total for 2001. The forecasted energy demand for 2003 is 150.9 TWh - an increase of 0.9% over 2002.

The peak demand forecast for both the winter and summer of 2003 are lower than the previous forecast due to the transition to a 60-minute peak. Next winter's 60-minute peak demand is expected to reach 23,750 MW. Next summer's 60-minute peak demand is anticipated to be just over 23,350 MW. All forecasts are based on Normal weather.

Figure 1 shows the difference between the current and previous demand forecasts over their common time frame. The difference is calculated as the current less the previous forecast, with negative values indicating that the current forecast is lower.

**Figure 1 Difference in Monthly Peak and Energy Demand – Current Forecast Vs Previous**



This page intentionally left blank.

**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 Market Operator (IMO) assumes no responsibility to you or any third party for the consequences of any errors or omissions. The IMO may revise these materials at any time in its sole discretion without notice to you. Although every effort will be made by the IMO to update these materials to incorporate any such revisions it is up to you to ensure you are using the most recent version.

This page intentionally left blank.

**Table of Contents**

**Executive Summary .....i**

**1.0 Introduction..... 1**

    1.1 Outlook Documents ..... 1

    1.2 Demand Forecast Document..... 1

**2.0 Forecasting Inputs and Assumptions .....3**

**3.0 Historical Demand .....5**

    3.1 Historical Energy Demand..... 6

    3.2 Historical Peak Demand ..... 7

**4.0 Demand Forecast.....9**

    4.1 Energy Demand Forecast..... 9

    4.2 Peak Demand Forecast..... 10

    4.3 Comparison of Current Forecast to Previous Forecasts ..... 12

Appendix A - Energy Demand Forecast Details..... 13

Appendix B - Peak Demand Forecast Details ..... 15

Appendix C - Analytical Factors Affecting Demand..... 19

**List of Tables**

Table 2.1 Ontario Economic Drivers..... 4  
Table 3.1 Ontario Annual Energy and Peak Demand ..... 5  
Table 3.2 Ontario Annual Energy Demand, Actual and Weather Corrected..... 6  
Table 3.3 Actual Historical Peak Demand..... 8  
Table 3.4 Weather Corrected Historical Peak Demand ..... 8  
Table 4.1 Ontario Monthly Energy Demand, Normal & Extreme Weather..... 9  
Table 4.2 Forecast of Monthly Peak Demand – Normal & Extreme Weather..... 11  
Table A1 Weekly Zonal Energy Forecast, Normal Weather ..... 13  
Table B1 Weekly Zonal Coincident Peak Demand Forecast, Normal Weather..... 15  
Table B2 Weekly Zonal Non-Coincident Peak Demand Forecast, Normal Weather ..... 17  
Table C1 Approximate Analytical Factors Affecting Demand ..... 19

**List of Figures**

Figure 1 Difference in Monthly Peak and Energy Demand – Current Forecast Vs Previous.....i  
Figure 3.1 Annual Energy Demand and Employment..... 7  
Figure 4.1 Monthly System Energy Demand – Normal Weather ..... 10  
Figure 4.2 Forecast of Weekly 60-Minute System Peak Demand - Normal & Extreme Weather 11



## 1.0 Introduction

### 1.1 Outlook Documents

The Ontario Electricity Market Rules (Chapter 5 Section 7.1) require that the Independent Electricity Market Operator (IMO) produce and publish demand forecasts on a quarterly basis for the next 18 months. This Ontario Demand Forecast covers the 18-Month period from October 1, 2002 to March 31, 2004 and supercedes the previous forecast from July 2002 to December 2003, dated June 24, 2002.

### 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 described methodology in the document “Methodology to Perform Long Term Assessments “(IMO\_REP\_0044). Readers may envision other possible scenarios, recognizing the uncertainties associated with various input assumptions, and are encouraged to use their own judgement in considering possible future scenarios. This forecast provides a base upon which changes in assumptions can be considered.

The Ontario Demand is the sum of coincident loads plus the losses on the IMO-controlled grid. This demand forecast was based on actual demand, weather and economic data as of June 2002.

Section 2.0 describes the assumptions used in this forecast of electricity demand. Section 3.0 looks at historical demand, Section 4.0 presents the forecast and Appendices A through C contain additional demand forecast details and analysis.

Readers are invited to provide comments on this report or to give suggestions as to the content of future reports. To do so, please call the IMO Help Centre at 905-403-6900 or 1-888-448-7777 or send an email to [helpcentre@theIMO.com](mailto:helpcentre@theIMO.com). Copies of the forecast, by hour and zone, are available upon request.

This page intentionally left blank.

## 2.0 Forecasting Inputs and Assumptions

A detailed description of the demand forecasting methodology can be found in the document [Methodology to Perform Long Term Assessments \(IMO\\_REP\\_0044\)](#). In addition to the methodology described in the document, the forecast of electricity demand requires inputs and/or assumptions with respect to economic activity and weather. This section describes these inputs.

Consumption of energy is modeled using three sets of forecast drivers: calendar variables, weather effects and economic conditions. Each of these drivers is embedded in the forecasting system and each plays a role in shaping the results. Appendix C, Analytical Factors Affecting Demand, summarizes the relative impacts on energy and peak demand for the driver variables.

**Calendar** variables are relatively static and are not addressed here. For a more detailed discussion the reader is encouraged to look at the [Methodology](#) document.

**Weather** effects include measures of temperature, cloud cover, wind speed and dew point. Both energy and peak demand are weather sensitive. The length and severity of a season's weather contributes to the level of energy consumed and severe weather conditions usually underpin the seasonal peaks.

For purposes of the demand forecast "Normal" weather - based on historical data - is utilized rather than forecast weather. Normal weather is calculated by ranking the weather within each historical week, then taking the average of each of the ranked days. In this way, the Normal weather for each week reflects both hotter and colder days. An Extreme weather scenario is also based on historical weather but uses minimums and maximums rather the average in the Normal weather scenario. It is interesting to note that the Extreme scenario is essentially built of a series of 1 in 30-year events. The possibility of this occurring every week is very remote, however the possibility of having at least one week with a 1 in 30 years event is significant. Hence the need for the Extreme scenario. A more detailed explanation of how the Extreme and Normal weather scenarios are generated is contained in the [Methodology](#) document.

Load Forecast Uncertainty (LFU) is a measure of the uncertainty in demand due to weather variations. LFU represents the variation in peak demand due to one standard deviation in the weather elements underpinning the peak demand. This information is valuable in determining a distribution of potential outcomes under various weather conditions. It should be recognized that for resource adequacy assessments, the "Normal" weather forecast is used in conjunction with LFU to consider a range of peak demands that can occur with various weather conditions with varying probability of occurrence.

**Economic** conditions contribute to the growth in both peak and energy demand. To produce a demand forecast an economic forecast of various drivers is required. A consensus of four major, publicly available provincial forecasts was utilized to generate the economic drivers used in the model. Table 2.1 summarizes the key economic drivers for energy and peak demand on the IMO-controlled grid.

In general, the economic outlook for the Ontario sees moderate growth for both 2002 and 2003. In comparison to the previous demand forecast the growth expectations are higher for both 2002 and 2003.

**Table 2.1 Ontario Economic Drivers**

Year	Ontario Employment		Ontario Housing Starts	
	Thousands	Annual Growth (%)	Thousands	Annual Growth (%)
1995	5,128	2.0	31.9	(23.3)
1996	5,175	0.9	39.5	23.9
1997	5,298	2.4	50.0	26.5
1998	5,476	3.4	50.1	0.2
1999	5,672	3.6	62.9	25.6
2000	5,856	3.2	67.4	7.1
2001	5,962	1.8	70.3	4.2
2002 (f)	6,044	1.4	77.1	9.7
2003 (f)	6,172	2.1	68.6	(11.0)
2004 (f)	6,302	2.1	64.2	(6.4)

**Notes to Table 2.1:**

(f) indicates a forecasted value.

### 3.0 Historical Demand

This section looks at historical energy and peak demand and the factors affecting them. Energy demand represents the total consumption of electricity during a specified period of time, be it an hour, day, week, month, season or year. Peak demand represents the maximum requirement for electricity at a specific point in time. Ontario measures peak demand over the course of an hour. One can look at the daily, weekly, monthly, seasonal or annual peak.

Table 3.1 shows the actual annual energy and peak demand, on a calendar basis, for the period 1984-2001.

**Table 3.1 Ontario Annual Energy and Peak Demand**

Calendar Year	Annual Demand			
	Actual Energy (TWh)	Annual Growth (%)	Actual Peak (MW)	Annual Growth (%)
1984	112.29		18,896	
1985	116.05	3.34%	20,473	8.35%
1986	120.57	3.90%	20,668	0.95%
1987	126.46	4.88%	20,524	-0.70%
1988	134.39	6.28%	23,012	12.12%
1989	140.77	4.74%	23,630	2.69%
1990	136.74	-2.86%	22,311	-5.58%
1991	136.97	0.16%	23,212	4.04%
1992	134.38	-1.89%	23,540	1.41%
1993	133.48	-0.67%	22,087	-6.17%
1994	134.87	1.05%	24,007	8.69%
1995	137.04	1.60%	22,855	-4.80%
1996	137.42	0.28%	22,321	-2.34%
1997	138.37	0.69%	22,197	-0.56%
1998	139.93	1.13%	<b>22,443</b>	1.11%
1999	144.09	2.97%	<b>23,435</b>	4.42%
2000	146.95	1.98%	23,428	-0.03%
2001	146.91	-0.02%	<b>25,269</b>	7.86%

**Notes to Table 3.1:**

Italics, bold and shading indicate a summer peak.

### 3.1 Historical Energy Demand

Actual primary energy demand has averaged annual growth of 1.6% over the historic period of 1984 to 2001. Energy demand is affected by the three classes of drivers but to varying degrees. On an annual basis, all years would be equal in terms of calendar effects except for leap years, which would have an additional day. Weather will impact annual energy consumption, however not to the degree that peak values are weather sensitive. This is due to the fact that throughout the course of the year, the variability of weather will mean that highs and lows tend to offset each other. The growth in energy demand is highly influenced by the economic class of drivers, which includes both economic activity and demographic factors.

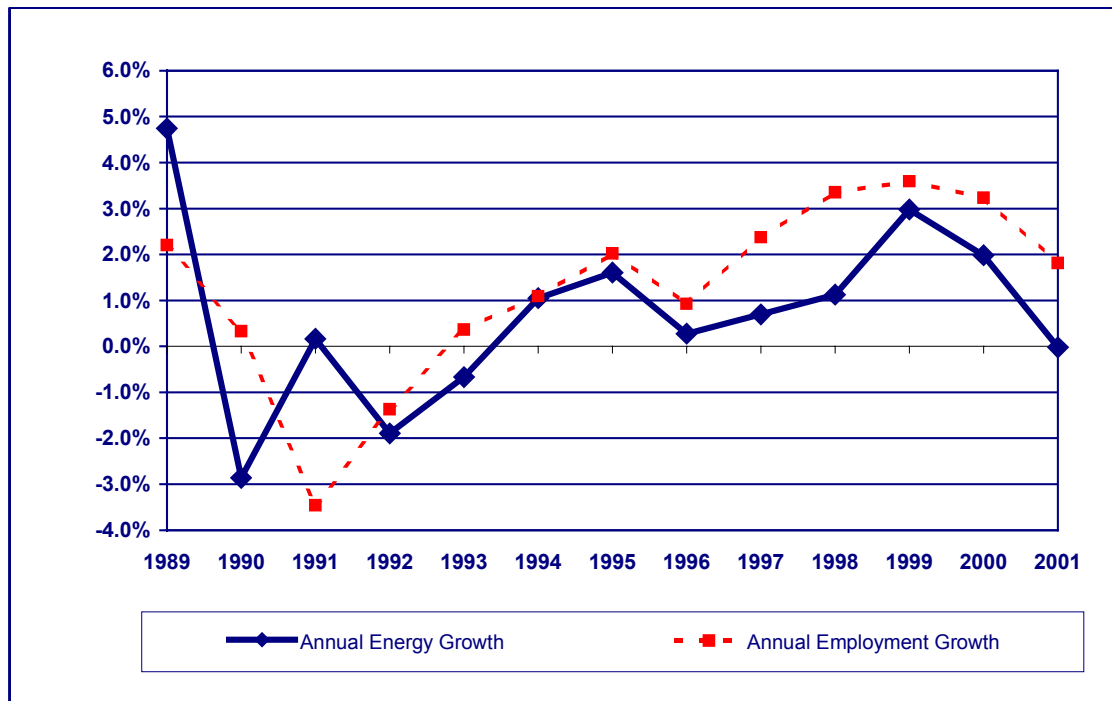
Table 3.2 shows the weather corrected annual energy demand. The actual energy demand is adjusted to reflect the Normal weather that underpins the forecast. This table will not match similar tables in earlier documents as the model to calculate weather corrected values has been updated and will give slightly different results. The weather correction for each of the years is less than 1%, reinforcing that variations in weather throughout the year tend to mitigate each other. It is also interesting to note that weather corrections have lowered the value in 4 of the 7 years shown. However, this recent trend has not influenced this forecast any more than the previous 20 years of historical data, since the forecasting methodology employed does not attempt to include cyclical effects of weather, which occur with various frequencies.

**Table 3.2 Ontario Annual Energy Demand, Actual and Weather Corrected**

Calendar Year	Annual Energy Demand			
	Actual Energy (TWh)	Annual Growth (%)	Weather Corrected Energy (TWh)	Annual Growth (%)
1995	137.04	1.60%	135.80	
1996	137.42	0.28%	136.59	0.59%
1997	138.37	0.69%	138.12	1.12%
1998	139.93	1.13%	140.39	1.64%
1999	144.09	2.97%	143.43	2.16%
2000	146.95	1.98%	147.07	2.54%
2001	146.91	-0.02%	147.14	0.05%

Figure 3.1 graphically shows employment and annual energy demand. It is easy to see that the strong correlation between employment and annual energy demand over the course of recent history.

Figure 3.1 Annual Energy Demand and Employment



### 3.2 Historical Peak Demand

Historically, Ontario's electricity peak demand has occurred during the winter, usually in the months of December through February and between the hours of 5 p.m. to 7 p.m. Exceptions to this were in 1998, 1999, 2001 and potentially 2002, when the annual peak demand occurred during the afternoon of July and August. Peak demand is affected by the three classes of drivers but to varying degrees.

Calendar variables, in conjunction with weather, have a large impact on peak demand. Weekly or monthly peak demands rarely occur on a weekend or holiday. Since 1985 only 4 of the 204 monthly peaks have occurred on a weekend and none of those were summer or winter peaks.

In conjunction with calendar impacts, weather plays the biggest role in determining peak values. Severe weather conditions underpin peak demand, particularly so if those weather conditions persist over several days.

Over the course of a season, weather can exhibit great variability. For example, a winter that is generally mild will have a lower than normal energy demand, but can still give rise to a higher than normal peak demand due to a short cold spell. These severe weather episodes are captured in the IMO's analysis in the LFU and the Extreme weather scenario. Using the LFU allows a probability to be assigned to these weather events.

Table 3.4 shows the actual summer and winter peaks from 1990 through to 2001. Unlike energy demand, which shows a generally smooth upward trend, peak demand shows the variability more closely associated with the weather underpinning that day's peak.

**Table 3.3 Actual Historical Peak Demand**

Seasonal Year	Winter Peak (MW)	Summer Peak (MW)
1990	23,491	20,408
1991	23,046	21,121
1992	23,463	19,939
1993	21,964	20,883
1994	23,857	20,918
1995	22,812	21,674
1996	22,613	21,378
1997	22,030	21,613
1998	21,494	22,403
1999	23,150	23,433
2000	23,301	23,160
2001	23,126	25,239
2002	22,263	25,414

**Notes to Table 3.3:**

The winter season is from November through March. Therefore, in the case of 1996, the winter spans November 1995 through to March 1996. Spring consists of April and May, summer of June through August and fall September and October.

As with energy demand, peak demand can be adjusted to reflect Normal weather rather than the actual weather underpinning it. The results of this correction are shown in Table 3.5. By comparing this table with the previous one it is possible to discern those seasons where the peak weather conditions were above or below the Normal weather.

**Table 3.4 Weather Corrected Historical Peak Demand**

Seasonal Year	Winter Peak (MW)	Summer Peak (MW)	Winter Peak Correction Factor (MW)	Summer Peak Correction Factor (MW)
1995	22,216	20,788	-596	-886
1996	22,051	20,441	-562	-937
1997	21,634	20,649	-396	-964
1998	21,881	21,661	387	-742
1999	22,297	21,727	-853	-1,706
2000	22,546	22,115	-755	-1,045
2001	23,052	22,592	-74	-2,647
2002	23,309	24,472	1,046	-942



## 4.0 Demand Forecast

The demand forecast is split into two separate parts, the energy demand forecast and the 60-minute peak demand forecast. In this section the discussion focuses on Ontario demand, however more detailed information on the individual zones can be found in Appendices A and B.

### 4.1 Energy Demand Forecast

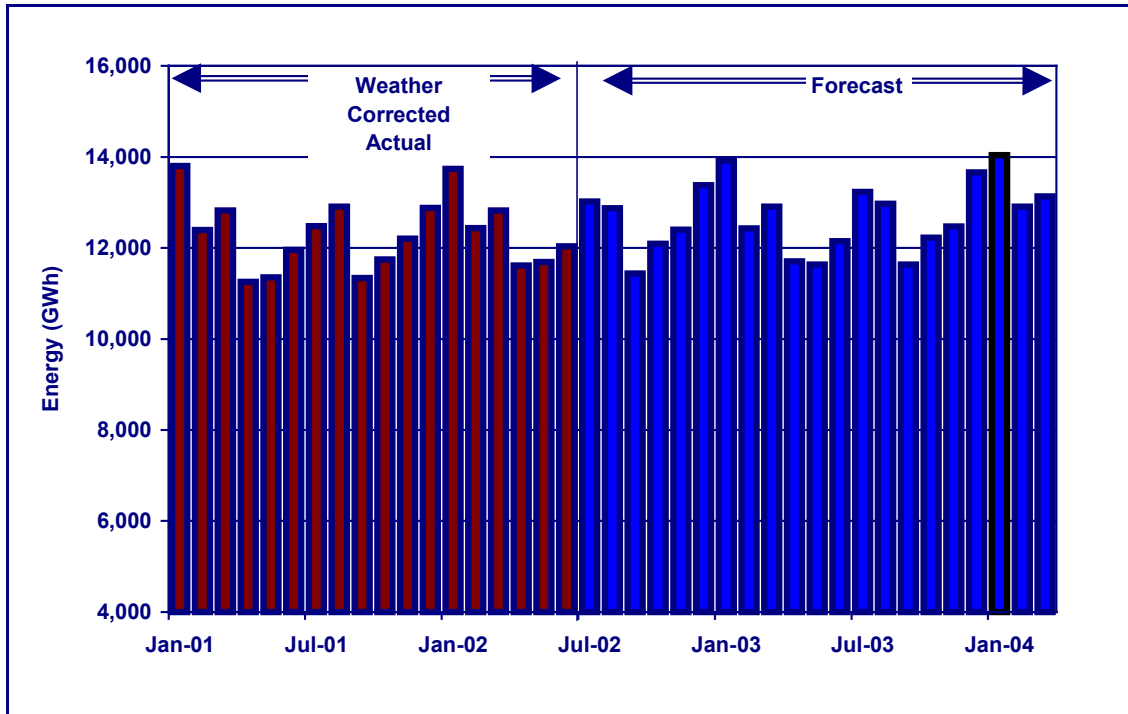
The predicted monthly energy demand for the system for the timeframe October 2002 through to March 2004 is contained in Table 4.1. This table contains the forecast of energy demand under both the Normal and Extreme weather scenarios. Figure 4.1 shows the monthly energy demand. Energy demand is expected to exhibit average annual growth of 1.6% in 2002 and 0.9% in 2003. Growth in demand is driven by changes in economic activity, the number of end-users and the penetration of electric powered devices.

A forecast of zonal energy demand by week is provided in Appendix A. Energy demand growth varies across the zones as they are subject to different economic forces.

**Table 4.1 Ontario Monthly Energy Demand, Normal & Extreme Weather**

Month	Energy Demand - Normal Weather	Energy Demand - Extreme Weather
	(G W h)	(G W h)
Oct-02	12,090	14,316
Nov-02	12,400	14,311
Dec-02	13,379	12,298
Jan-03	13,923	12,571
Feb-03	12,430	13,196
Mar-03	12,906	14,565
Apr-03	11,703	15,033
May-03	11,632	13,581
Jun-03	12,147	13,934
Jul-03	13,231	12,342
Aug-03	12,970	12,517
Sep-03	11,635	13,485
Oct-03	12,224	14,527
Nov-03	12,472	14,424
Dec-03	13,662	12,449
Jan-04	14,039	12,702
Feb-04	12,909	13,279
Mar-04	13,134	14,849

Figure 4.1 Monthly System Energy Demand – Normal Weather



## 4.2 Peak Demand Forecast

The forecast of monthly peak demand is contained in Table 4.2. This table contains the forecast under both the Normal and Extreme weather scenarios. A forecast of zonal weekly peak demand (both coincident and non-coincident) is contained in Appendix B. The coincident peak represents the peak Ontario Demand and the corresponding zonal values at the time of the system peak. The non-coincident peak values are the individual peaks for each of the zones. The forecast non-coincident peaks may or may not occur at the same time.

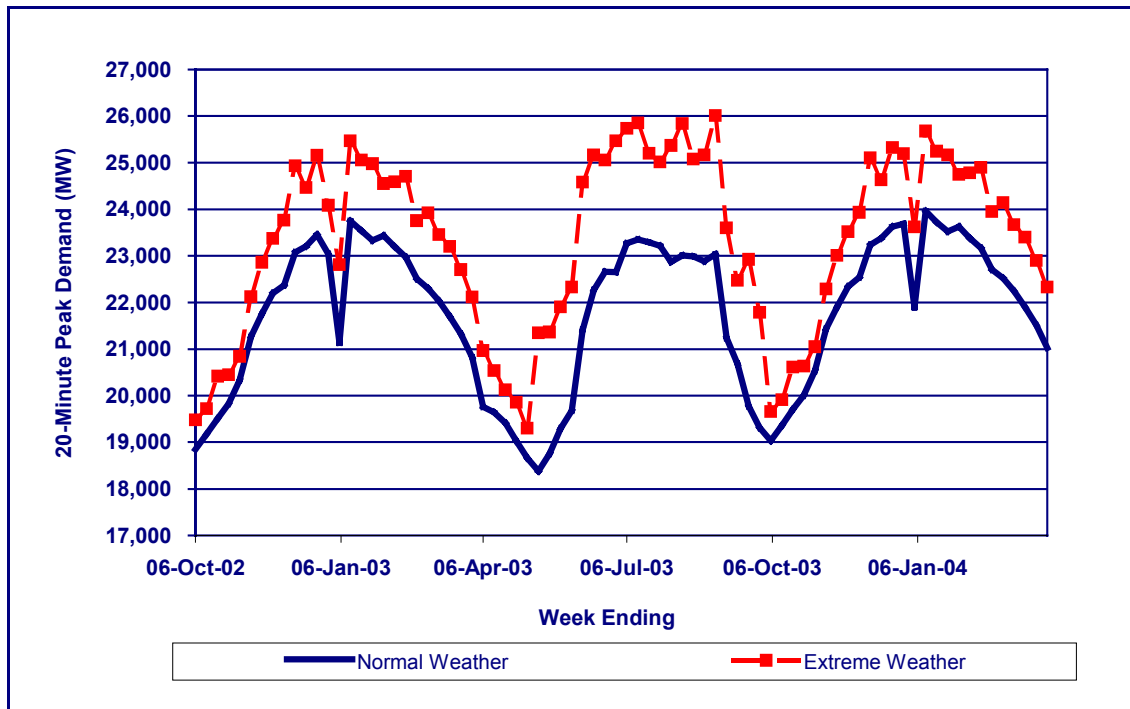
The Normal weather winter peak for 2003 is expected to be 23,755 MW, increasing to 23,960 MW for winter 2004. The Normal weather summer peak for 2004 is projected to be 23,354 MW. These values represent the combination of the forecast of economic activity and the Normal weather scenario. Figure 4.2 displays the forecast of weekly system peaks for both the Normal and Extreme weather scenarios. The Extreme weather peaks are forecasted to be 25,470 MW for the winter of 2003, 26,006 MW for the summer of 2003 and 25,675 MW for the winter of 2004.

The resource adequacy assessments described in the companion document, “An Assessment of the Reliability of the IMO-Controlled Grid”, take into consideration the full range of possible weather conditions on a probabilistic basis. Results are presented assuming Normal weather as a base. Allowance for the probability of demand being higher than those assumed in the base case is made in the calculation of the required reserve level. For the purposes of the assessment, it has been assumed that 300 MW of the peak demand is price sensitive and therefore may not be present at times when the demand/supply balance is tight.

**Table 4.2 Forecast of Monthly Peak Demand – Normal & Extreme Weather**

Month	Normal Weather Peak Demand	Extreme Weather Peak Demand
	(MW)	(MW)
Oct-02	20,331	20,844
Nov-02	22,375	23,762
Dec-02	23,458	25,155
Jan-03	23,755	25,470
Feb-03	23,194	24,705
Mar-03	22,032	23,456
Apr-03	19,758	20,966
May-03	19,678	22,331
Jun-03	22,657	25,468
Jul-03	23,354	25,853
Aug-03	23,035	26,006
Sep-03	21,235	23,600
Oct-03	20,538	21,051
Nov-03	22,543	23,931
Dec-03	23,693	25,322
Jan-04	23,960	25,675
Feb-04	23,384	24,895
Mar-04	22,243	23,668

**Figure 4.2 Forecast of Weekly 60-Minute System Peak Demand - Normal & Extreme Weather**



### 4.3 Comparison of Current Forecast to Previous Forecasts

The most recent forecast with which this 18-Month forecast can be compared is the one published June 24, 2002, covering the period July 2002 to December 2003. The current forecast is primarily an update to the previous one. The forecasting system was re-estimated based on actual economic, weather and demand data through to the end of June 2002. In addition to the re-estimation of the model an updated economic forecast was fed into the system. As mentioned earlier in the document, the only methodological change was the move to a 60-minute rather than a 20-minute peak demand value. This change was made in order to be more consistent with surrounding jurisdictions, which use a 60-minute peak value. Over the last 18 years, the 60-minute peak was, on average, 80 MW lower than the 20-minute peak.

The economic outlook sees a marginally stronger 2002-2003 as compared to the previous forecast. Higher economic growth for the second half of 2002 and higher than anticipated demand for the first half of 2002 has led to a higher energy demand forecast for 2002 – 149.5 TWh versus 148.5 TWh in the previous document. The energy demand outlook for 2004 has increased as well, standing at 150.9 TWh up from 150.0 TWh in the previous document.

With the transition to a 60-minute peak from a 20-minute peak the forecasts are not directly comparable. In general, the peak values are lower, but some of the decline has been offset by the expected increase in economic activity. As well, in updating the models for the most recent data, the winter peaks have been revised downward while the summer peaks have been increased. The previous forecast predicted a 2003 winter Normal peak of just over 23,900 MW and this forecast is predicts a lower 23,755 MW. The current forecast predicts a 2003 summer Normal peak of 23,354 MW as opposed to 23,371 MW previously. The Extreme weather winter peak for 2003 is lower than the previous forecast (25,470 MW vs. 25,643 MW). The Extreme weather summer peak for 2003 peak tops 26,000 MW, down slightly from the previous forecast.

## Appendix A - Energy Demand Forecast Details

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

Week Ending	(GWh)										
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	Total System
06-Oct-02	147	202	169	127	170	911	112	7	506	303	2,655
13-Oct-02	148	207	179	139	170	915	113	7	514	303	2,694
20-Oct-02	148	213	185	148	167	898	112	7	511	300	2,688
27-Oct-02	148	217	195	159	169	923	115	7	531	309	2,773
03-Nov-02	150	217	189	153	167	928	116	8	526	312	2,765
10-Nov-02	154	220	200	163	175	944	119	9	540	318	2,841
17-Nov-02	156	223	208	171	180	966	120	8	550	322	2,904
24-Nov-02	157	225	214	177	182	976	120	9	558	324	2,942
01-Dec-02	158	227	219	183	184	984	121	9	567	326	2,977
08-Dec-02	162	231	227	191	190	1,007	122	9	581	331	3,051
15-Dec-02	162	234	232	195	193	1,012	122	9	586	332	3,076
22-Dec-02	163	237	236	200	196	1,022	123	9	591	336	3,113
29-Dec-02	147	225	227	193	189	953	113	8	551	317	2,922
05-Jan-03	156	232	227	190	188	957	114	8	547	312	2,931
12-Jan-03	167	243	242	204	205	1,039	126	8	600	342	3,176
19-Jan-03	167	242	241	203	203	1,031	125	8	598	340	3,158
26-Jan-03	166	240	239	202	200	1,025	125	9	596	339	3,142
02-Feb-03	167	241	241	205	201	1,035	126	9	602	342	3,167
09-Feb-03	165	238	240	203	199	1,035	126	9	601	341	3,156
16-Feb-03	165	236	236	200	195	1,025	125	9	596	338	3,126
23-Feb-03	164	232	229	194	189	1,006	124	9	584	332	3,063
02-Mar-03	163	230	228	193	189	1,010	125	9	581	331	3,059
09-Mar-03	161	226	223	191	185	990	124	9	571	326	3,005
16-Mar-03	159	223	219	191	181	975	123	9	566	324	2,969
23-Mar-03	156	218	214	189	175	954	122	8	558	320	2,914
30-Mar-03	152	213	206	186	167	920	120	8	544	313	2,830
06-Apr-03	150	217	195	171	166	927	117	6	538	311	2,799
13-Apr-03	152	213	197	164	162	920	117	7	533	311	2,776
20-Apr-03	149	207	193	164	151	881	114	7	515	301	2,681
27-Apr-03	146	200	192	166	148	885	115	6	518	303	2,680
04-May-03	146	193	190	166	145	877	114	6	515	300	2,653
11-May-03	145	189	188	165	144	872	112	6	515	298	2,633
18-May-03	143	189	187	162	144	873	112	6	513	298	2,626
25-May-03	140	191	187	157	143	856	111	6	499	295	2,585
01-Jun-03	141	188	187	156	150	898	115	6	514	308	2,663
08-Jun-03	142	189	177	144	170	961	120	5	532	340	2,779
15-Jun-03	141	185	180	146	174	984	121	6	555	340	2,833
22-Jun-03	141	183	181	148	176	999	123	7	572	337	2,867
29-Jun-03	142	182	182	151	177	1,017	124	7	583	328	2,893

**Notes to Table A1:**

Figures may not add due to rounding.

Table A1 – continued

Week Ending	(GWh)										
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	Total System
06-Jul-03	137	180	185	154	182	1,044	126	7	595	329	2,939
13-Jul-03	136	180	187	154	188	1,058	127	6	592	342	2,971
20-Jul-03	137	182	187	156	191	1,068	127	5	580	358	2,991
27-Jul-03	137	182	182	154	189	1,049	125	5	566	372	2,960
03-Aug-03	138	181	181	153	189	1,050	125	6	567	374	2,963
10-Aug-03	140	186	178	148	186	1,029	125	6	557	370	2,924
17-Aug-03	140	189	179	149	188	1,038	126	6	564	373	2,953
24-Aug-03	141	194	178	148	187	1,034	127	6	564	372	2,951
31-Aug-03	143	200	179	147	188	1,041	129	7	569	377	2,978
07-Sep-03	133	196	180	144	162	937	118	7	529	329	2,736
14-Sep-03	140	197	177	138	165	942	117	8	531	324	2,738
21-Sep-03	142	197	170	129	167	929	115	7	522	314	2,692
28-Sep-03	144	197	169	127	169	926	113	7	519	310	2,680
05-Oct-03	147	201	171	129	171	924	113	7	514	309	2,685
12-Oct-03	148	206	180	140	171	928	114	7	520	308	2,722
19-Oct-03	148	211	187	149	168	910	113	7	518	305	2,717
26-Oct-03	148	215	197	161	170	935	117	7	537	313	2,801
02-Nov-03	150	216	190	155	168	942	117	8	534	316	2,795
09-Nov-03	154	219	203	166	175	952	121	9	546	323	2,868
16-Nov-03	156	221	210	173	181	974	122	9	556	327	2,929
23-Nov-03	157	224	216	180	182	986	122	9	563	328	2,967
30-Nov-03	158	226	221	186	184	994	122	9	573	330	3,002
07-Dec-03	163	230	230	194	190	1,016	123	9	587	335	3,077
14-Dec-03	162	232	234	198	193	1,021	124	9	592	336	3,102
21-Dec-03	163	235	238	203	196	1,032	125	9	598	340	3,139
28-Dec-03	151	226	233	201	193	989	118	8	573	331	3,023
04-Jan-04	158	232	231	195	190	981	117	8	562	322	2,997
11-Jan-04	168	241	245	208	205	1,049	127	8	607	347	3,204
18-Jan-04	167	240	243	206	203	1,040	127	9	604	345	3,185
25-Jan-04	166	238	241	205	200	1,035	127	9	603	344	3,169
01-Feb-04	167	239	244	208	202	1,045	128	9	608	346	3,195
08-Feb-04	165	236	242	206	200	1,044	127	9	608	346	3,184
15-Feb-04	165	234	238	203	196	1,035	127	9	603	343	3,154
22-Feb-04	164	230	231	197	189	1,015	126	9	592	337	3,091
29-Feb-04	163	229	231	197	190	1,020	126	9	589	336	3,090
07-Mar-04	161	224	225	194	185	1,001	125	9	578	331	3,035
14-Mar-04	159	221	222	194	181	986	125	9	573	329	2,999
21-Mar-04	156	216	216	192	176	965	124	8	565	325	2,943
28-Mar-04	152	212	209	189	168	931	122	8	551	318	2,860

**Notes to Table A1:**

Figures may not add due to rounding.

## Appendix B - Peak Demand Forecast Details

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

Week Ending	60-Minute Coincident Peak Demand (MW)											Load Forecast Uncertainty
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	System	
06-Oct-02	936	1,259	1,199	1,159	1,267	6,466	781	43	3,626	2,117	18,853	348
13-Oct-02	918	1,288	1,308	1,230	1,284	6,550	782	45	3,666	2,103	19,174	350
20-Oct-02	921	1,315	1,370	1,310	1,278	6,621	788	45	3,739	2,125	19,512	383
27-Oct-02	919	1,340	1,432	1,391	1,272	6,678	795	47	3,801	2,150	19,825	428
03-Nov-02	943	1,360	1,374	1,326	1,301	7,034	803	51	3,900	2,239	20,331	369
10-Nov-02	980	1,387	1,524	1,478	1,379	7,201	853	62	4,070	2,332	21,266	546
17-Nov-02	1,000	1,402	1,583	1,549	1,425	7,353	865	61	4,142	2,375	21,755	417
24-Nov-02	1,009	1,437	1,645	1,622	1,466	7,467	873	60	4,222	2,396	22,197	576
01-Dec-02	1,011	1,445	1,673	1,662	1,472	7,467	877	65	4,295	2,408	22,375	583
08-Dec-02	1,042	1,481	1,756	1,761	1,540	7,659	888	66	4,429	2,449	23,071	850
15-Dec-02	1,040	1,494	1,784	1,796	1,558	7,671	888	63	4,463	2,450	23,207	711
22-Dec-02	1,042	1,515	1,815	1,833	1,570	7,747	897	64	4,492	2,483	23,458	905
29-Dec-02	1,033	1,530	1,798	1,794	1,516	7,590	881	60	4,392	2,451	23,045	640
05-Jan-03	993	1,452	1,667	1,694	1,383	6,888	817	55	3,969	2,214	21,132	753
12-Jan-03	1,061	1,541	1,857	1,883	1,600	7,845	898	60	4,504	2,506	23,755	858
19-Jan-03	1,052	1,534	1,838	1,856	1,580	7,759	895	60	4,470	2,489	23,533	953
26-Jan-03	1,044	1,518	1,828	1,840	1,567	7,695	888	60	4,442	2,451	23,333	845
02-Feb-03	1,043	1,517	1,840	1,842	1,571	7,743	891	62	4,467	2,457	23,433	589
09-Feb-03	1,029	1,500	1,812	1,801	1,542	7,695	887	62	4,432	2,434	23,194	707
16-Feb-03	1,027	1,486	1,788	1,761	1,518	7,640	883	65	4,397	2,407	22,972	778
23-Feb-03	1,018	1,464	1,740	1,698	1,479	7,498	873	64	4,313	2,361	22,508	825
02-Mar-03	1,025	1,450	1,682	1,716	1,440	7,429	862	64	4,262	2,367	22,297	803
09-Mar-03	1,012	1,426	1,665	1,709	1,417	7,329	857	63	4,208	2,346	22,032	770
16-Mar-03	993	1,403	1,639	1,692	1,382	7,199	850	60	4,159	2,318	21,695	729
23-Mar-03	973	1,378	1,605	1,665	1,340	7,066	844	57	4,102	2,289	21,319	712
30-Mar-03	948	1,351	1,566	1,632	1,297	6,864	836	56	4,016	2,252	20,818	668
06-Apr-03	918	1,343	1,384	1,403	1,232	6,680	795	37	3,815	2,151	19,758	548
13-Apr-03	946	1,379	1,416	1,330	1,201	6,571	807	48	3,777	2,168	19,643	458
20-Apr-03	928	1,350	1,438	1,351	1,158	6,461	809	44	3,732	2,139	19,410	438
27-Apr-03	909	1,309	1,406	1,326	1,103	6,353	796	42	3,683	2,099	19,026	394
04-May-03	911	1,227	1,333	1,304	1,041	6,336	803	41	3,594	2,073	18,663	365
11-May-03	876	1,127	1,238	1,231	1,076	6,324	765	41	3,570	2,131	18,379	1,191
18-May-03	869	1,128	1,268	1,252	1,112	6,475	788	39	3,624	2,204	18,759	1,605
25-May-03	857	1,177	1,312	1,272	1,148	6,719	818	39	3,682	2,271	19,295	1,361
01-Jun-03	851	1,187	1,346	1,294	1,159	6,923	832	42	3,732	2,312	19,678	1,444
08-Jun-03	867	1,178	1,342	1,329	1,374	7,642	911	40	4,022	2,703	21,408	1,315
15-Jun-03	865	1,171	1,399	1,398	1,428	7,994	934	48	4,282	2,746	22,265	1,324
22-Jun-03	872	1,169	1,415	1,432	1,435	8,142	955	49	4,443	2,745	22,657	1,194
29-Jun-03	874	1,165	1,413	1,448	1,443	8,152	960	51	4,494	2,652	22,652	1,401

**Notes to Table B1:**

Load Forecast Uncertainty (LFU) is one standard deviation in system peak demand due to variations in weather.

Table B1 - continued

Week Ending	60-Minute Coincident Peak Demand (MW)											Load Forecast Uncertainty
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	System	
06-Jul-03	839	1,155	1,455	1,512	1,479	8,462	983	52	4,639	2,696	23,272	1,286
13-Jul-03	838	1,144	1,464	1,522	1,519	8,491	986	49	4,588	2,753	23,354	1,118
20-Jul-03	844	1,152	1,453	1,529	1,525	8,472	982	41	4,467	2,829	23,294	1,003
27-Jul-03	846	1,152	1,425	1,526	1,515	8,390	972	40	4,372	2,974	23,212	972
03-Aug-03	850	1,145	1,393	1,493	1,500	8,246	952	41	4,323	2,930	22,873	1,090
10-Aug-03	860	1,155	1,397	1,483	1,509	8,292	963	44	4,344	2,958	23,005	1,220
17-Aug-03	867	1,192	1,392	1,454	1,513	8,256	968	45	4,335	2,968	22,990	989
24-Aug-03	872	1,222	1,383	1,420	1,509	8,213	963	46	4,320	2,934	22,882	1,225
31-Aug-03	878	1,248	1,382	1,399	1,506	8,276	977	48	4,348	2,973	23,035	1,344
07-Sep-03	835	1,216	1,360	1,313	1,286	7,610	905	52	4,058	2,600	21,235	1,242
14-Sep-03	848	1,209	1,281	1,218	1,283	7,423	884	51	3,948	2,535	20,680	891
21-Sep-03	865	1,168	1,194	1,129	1,291	7,065	832	52	3,797	2,381	19,774	1,330
28-Sep-03	878	1,161	1,145	1,075	1,287	6,901	806	51	3,717	2,293	19,314	1,343
05-Oct-03	934	1,246	1,206	1,172	1,274	6,544	790	45	3,676	2,147	19,034	348
12-Oct-03	920	1,277	1,317	1,241	1,291	6,632	791	45	3,714	2,134	19,362	350
19-Oct-03	923	1,303	1,382	1,325	1,285	6,703	798	43	3,787	2,156	19,705	383
26-Oct-03	921	1,329	1,441	1,402	1,280	6,754	804	46	3,848	2,179	20,004	428
02-Nov-03	942	1,350	1,392	1,351	1,304	7,113	813	50	3,953	2,270	20,538	369
09-Nov-03	978	1,373	1,543	1,504	1,378	7,257	864	61	4,115	2,361	21,434	546
16-Nov-03	1,000	1,387	1,595	1,566	1,423	7,405	875	62	4,185	2,402	21,900	417
23-Nov-03	1,010	1,423	1,659	1,640	1,465	7,523	884	60	4,253	2,425	22,342	576
30-Nov-03	1,012	1,432	1,690	1,682	1,474	7,534	889	64	4,328	2,438	22,543	583
07-Dec-03	1,043	1,467	1,772	1,780	1,541	7,721	899	65	4,473	2,478	23,239	850
14-Dec-03	1,041	1,480	1,799	1,816	1,558	7,732	899	66	4,506	2,478	23,375	711
21-Dec-03	1,043	1,499	1,829	1,852	1,570	7,803	907	66	4,547	2,510	23,626	905
28-Dec-03	1,042	1,509	1,848	1,876	1,579	7,825	909	64	4,524	2,517	23,693	721
04-Jan-04	975	1,499	1,752	1,778	1,464	7,126	830	57	4,139	2,278	21,898	729
11-Jan-04	1,063	1,524	1,877	1,910	1,603	7,919	911	60	4,554	2,539	23,960	858
18-Jan-04	1,054	1,517	1,855	1,882	1,582	7,828	907	61	4,519	2,522	23,727	953
25-Jan-04	1,044	1,502	1,846	1,867	1,568	7,761	899	62	4,490	2,485	23,524	845
01-Feb-04	1,043	1,500	1,857	1,868	1,573	7,811	903	62	4,518	2,491	23,626	589
08-Feb-04	1,029	1,483	1,830	1,827	1,543	7,760	899	64	4,482	2,467	23,384	707
15-Feb-04	1,027	1,470	1,806	1,788	1,519	7,704	894	63	4,449	2,441	23,161	778
22-Feb-04	1,021	1,448	1,760	1,727	1,479	7,560	885	63	4,366	2,394	22,703	825
29-Feb-04	1,027	1,436	1,707	1,752	1,439	7,500	874	65	4,316	2,400	22,516	803
07-Mar-04	1,013	1,411	1,683	1,734	1,420	7,408	868	65	4,262	2,379	22,243	770
14-Mar-04	995	1,389	1,654	1,715	1,385	7,274	862	59	4,209	2,352	21,894	729
21-Mar-04	975	1,363	1,622	1,689	1,341	7,136	856	58	4,153	2,322	21,515	712
28-Mar-04	952	1,336	1,584	1,658	1,300	6,942	848	55	4,068	2,286	21,029	668

**Notes to Table B1:**

Load Forecast Uncertainty (LFU) is one standard deviation in system peak demand due to variations in weather.



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

Week Ending	60-Minute Non-Coincident Peak Demand (MW)										
	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	Total
06-Oct-02	942	1,314	1,240	1,159	1,287	6,468	781	47	3,626	2,117	18,981
13-Oct-02	941	1,341	1,308	1,230	1,284	6,550	786	47	3,667	2,123	19,277
20-Oct-02	939	1,368	1,370	1,310	1,278	6,621	790	48	3,739	2,134	19,597
27-Oct-02	934	1,392	1,432	1,391	1,272	6,678	795	48	3,801	2,150	19,893
03-Nov-02	966	1,418	1,432	1,326	1,316	7,034	812	61	3,900	2,239	20,504
10-Nov-02	988	1,459	1,559	1,478	1,387	7,201	853	61	4,070	2,332	21,388
17-Nov-02	1,004	1,486	1,620	1,549	1,431	7,353	865	61	4,142	2,375	21,886
24-Nov-02	1,013	1,497	1,681	1,622	1,469	7,467	873	61	4,222	2,396	22,301
01-Dec-02	1,014	1,522	1,714	1,662	1,476	7,467	877	63	4,295	2,408	22,498
08-Dec-02	1,049	1,546	1,789	1,763	1,540	7,659	888	65	4,429	2,449	23,177
15-Dec-02	1,045	1,566	1,820	1,796	1,559	7,671	888	65	4,463	2,450	23,323
22-Dec-02	1,050	1,584	1,852	1,833	1,573	7,747	897	64	4,492	2,483	23,575
29-Dec-02	1,035	1,592	1,843	1,794	1,530	7,590	882	60	4,392	2,451	23,169
05-Jan-03	1,042	1,600	1,719	1,694	1,414	6,909	817	57	3,986	2,220	21,458
12-Jan-03	1,073	1,604	1,893	1,883	1,610	7,845	898	60	4,504	2,506	23,876
19-Jan-03	1,065	1,593	1,862	1,856	1,588	7,759	895	60	4,470	2,489	23,637
26-Jan-03	1,058	1,569	1,833	1,840	1,569	7,695	888	61	4,442	2,451	23,406
02-Feb-03	1,061	1,560	1,840	1,842	1,571	7,743	891	62	4,467	2,457	23,494
09-Feb-03	1,048	1,543	1,812	1,815	1,542	7,695	887	63	4,432	2,435	23,272
16-Feb-03	1,048	1,534	1,788	1,792	1,518	7,640	883	63	4,397	2,414	23,077
23-Feb-03	1,040	1,514	1,740	1,742	1,479	7,498	873	64	4,314	2,378	22,642
02-Mar-03	1,034	1,505	1,710	1,716	1,470	7,454	870	64	4,262	2,367	22,452
09-Mar-03	1,024	1,483	1,670	1,709	1,446	7,329	859	63	4,208	2,346	22,137
16-Mar-03	1,008	1,463	1,639	1,692	1,409	7,199	850	61	4,159	2,318	21,798
23-Mar-03	992	1,439	1,605	1,665	1,366	7,066	844	58	4,102	2,289	21,426
30-Mar-03	968	1,408	1,566	1,632	1,322	6,864	836	54	4,016	2,255	20,921
06-Apr-03	944	1,412	1,448	1,493	1,243	6,680	813	52	3,824	2,161	20,070
13-Apr-03	968	1,395	1,421	1,330	1,201	6,635	819	52	3,777	2,168	19,766
20-Apr-03	949	1,369	1,438	1,351	1,158	6,542	824	49	3,732	2,143	19,555
27-Apr-03	933	1,332	1,406	1,336	1,103	6,461	812	46	3,683	2,114	19,226
04-May-03	926	1,277	1,379	1,338	1,071	6,371	803	44	3,646	2,095	18,950
11-May-03	924	1,290	1,311	1,295	1,076	6,358	775	45	3,570	2,132	18,776
18-May-03	912	1,283	1,292	1,277	1,112	6,504	795	45	3,624	2,204	19,048
25-May-03	896	1,268	1,327	1,297	1,165	6,719	818	62	3,689	2,271	19,512
01-Jun-03	895	1,264	1,360	1,319	1,176	6,923	832	49	3,741	2,312	19,871
08-Jun-03	894	1,238	1,342	1,329	1,374	7,658	915	42	4,022	2,703	21,517
15-Jun-03	888	1,225	1,399	1,398	1,428	8,013	939	47	4,282	2,746	22,365
22-Jun-03	892	1,210	1,415	1,432	1,435	8,172	960	51	4,443	2,745	22,755
29-Jun-03	897	1,206	1,413	1,448	1,443	8,186	967	52	4,494	2,652	22,758

Table B2 - continued

60-Minute Non-Coincident Peak Demand (MW)											
Week Ending	Northwest	Northeast	East	Essa	Ottawa	Toronto	Niagara	Bruce	Southwest	West	Total
06-Jul-03	893	1,197	1,457	1,512	1,479	8,494	988	52	4,639	2,696	23,407
13-Jul-03	868	1,198	1,465	1,522	1,519	8,509	992	49	4,588	2,753	23,463
20-Jul-03	876	1,212	1,454	1,529	1,525	8,483	986	44	4,467	2,829	23,405
27-Jul-03	874	1,223	1,425	1,526	1,515	8,393	976	42	4,372	2,974	23,320
03-Aug-03	886	1,211	1,393	1,493	1,500	8,256	956	43	4,323	2,930	22,991
10-Aug-03	890	1,227	1,397	1,483	1,509	8,309	968	46	4,344	2,958	23,131
17-Aug-03	893	1,255	1,392	1,454	1,513	8,278	974	45	4,335	2,968	23,107
24-Aug-03	897	1,283	1,383	1,420	1,509	8,242	969	46	4,320	2,934	23,003
31-Aug-03	905	1,313	1,382	1,399	1,506	8,311	983	48	4,348	2,973	23,168
07-Sep-03	884	1,320	1,372	1,337	1,310	7,610	905	54	4,058	2,600	21,450
14-Sep-03	899	1,327	1,292	1,246	1,304	7,423	884	54	3,952	2,536	20,917
21-Sep-03	915	1,337	1,203	1,129	1,291	7,091	840	52	3,802	2,381	20,041
28-Sep-03	924	1,340	1,198	1,102	1,287	6,918	813	51	3,740	2,293	19,666
05-Oct-03	943	1,303	1,250	1,172	1,293	6,544	790	48	3,676	2,147	19,166
12-Oct-03	944	1,332	1,317	1,241	1,291	6,632	796	47	3,719	2,157	19,476
19-Oct-03	941	1,358	1,382	1,325	1,285	6,703	800	48	3,787	2,167	19,796
26-Oct-03	937	1,381	1,441	1,402	1,280	6,754	804	48	3,848	2,179	20,074
02-Nov-03	955	1,405	1,451	1,351	1,317	7,113	813	58	3,953	2,270	20,686
09-Nov-03	987	1,444	1,578	1,504	1,382	7,257	864	62	4,115	2,361	21,554
16-Nov-03	1,005	1,470	1,634	1,566	1,427	7,405	875	61	4,185	2,402	22,030
23-Nov-03	1,014	1,485	1,696	1,642	1,465	7,523	884	61	4,253	2,425	22,448
30-Nov-03	1,016	1,509	1,731	1,682	1,474	7,534	889	64	4,328	2,438	22,665
07-Dec-03	1,049	1,534	1,805	1,786	1,541	7,721	899	66	4,473	2,478	23,352
14-Dec-03	1,046	1,554	1,836	1,816	1,558	7,732	899	65	4,506	2,478	23,490
21-Dec-03	1,050	1,570	1,867	1,852	1,570	7,803	907	65	4,547	2,510	23,741
28-Dec-03	1,051	1,578	1,887	1,876	1,582	7,825	909	63	4,524	2,517	23,812
04-Jan-04	1,057	1,584	1,773	1,778	1,488	7,188	871	58	4,139	2,354	22,290
11-Jan-04	1,074	1,590	1,914	1,910	1,610	7,919	911	61	4,554	2,539	24,082
18-Jan-04	1,065	1,577	1,886	1,882	1,589	7,828	907	61	4,519	2,522	23,836
25-Jan-04	1,058	1,557	1,855	1,867	1,568	7,761	899	61	4,490	2,485	23,601
01-Feb-04	1,061	1,552	1,857	1,868	1,573	7,811	903	62	4,518	2,491	23,696
08-Feb-04	1,048	1,536	1,830	1,842	1,543	7,760	899	63	4,482	2,469	23,472
15-Feb-04	1,047	1,527	1,806	1,819	1,519	7,704	894	64	4,449	2,448	23,277
22-Feb-04	1,041	1,507	1,760	1,771	1,479	7,560	885	65	4,369	2,411	22,848
29-Feb-04	1,035	1,499	1,738	1,752	1,469	7,523	882	65	4,316	2,400	22,679
07-Mar-04	1,026	1,477	1,693	1,734	1,448	7,408	871	64	4,262	2,379	22,362
14-Mar-04	1,009	1,458	1,654	1,715	1,411	7,274	862	61	4,209	2,352	22,005
21-Mar-04	993	1,433	1,622	1,689	1,366	7,136	856	59	4,153	2,322	21,629
28-Mar-04	972	1,403	1,584	1,658	1,324	6,942	848	55	4,068	2,287	21,141

## Appendix C - Analytical Factors Affecting Demand

**Table C1 Approximate Analytical Factors Affecting Demand**

Factors Affecting Daily Energy Demand			
Variable Class	Variable	Change in Variable	Impact On Daily Energy Demand (MWh)
Weather	Daily Avg Temperature > 16° C 10°C > and < 16° C < 10°C	1°C Increase	6,380 MWh Increase
		1°C Increase	420 MWh Increase
		1°C Decrease	2,520 MWh Increase
	Daily Avg Humidity - Dewpoint > 16° C 10°C > and < 16° C < 10°C	1°C Increase	2,320 MWh Increase
		1°C Increase	150 MWh Increase
		1°C Decrease	920 MWh Increase
	Wind	Summer 1 km/hr Decrease	270 MWh Increase
		Winter 1 km/hr Increase	200 MWh Increase
	Cloud	Summer Decrease of 1 on Scale	1,010 MWh Increase
		Winter Increase of 1 on Scale	1,730 MWh Increase
Economic	Employment	Increase of 1,000 jobs	20 MWh Increase
	Housing Stock	Increase of 1,000 houses	30 MWh Increase
Calendar	Holidays	New Year's Day	66,000 MWh Decrease
		Good Friday	46,000 MWh Decrease
		Victoria Day	49,000 MWh Decrease
		Canada Day	26,000 MWh Decrease
		Simcoe Day	37,000 MWh Decrease
		Labour Day	55,000 MWh Decrease
		Thanksgiving Day	54,000 MWh Decrease
		Remembrance Day	6,000 MWh Decrease
		Christmas	85,000 MWh Decrease
		Boxing Day	51,000 MWh Decrease
		New Year's Eve	20,000 MWh Decrease
		Week Between Christmas and New Years Eve	38,000 MWh Decrease
		Day of Week	Monday vs Sunday
	Tuesday vs Sunday		46,000 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	Temperature	> 16° C	1°C Increase	360 MW Increase
		10°C > and < 16° C	1°C Increase	40 MW Increase
		< 10°C	1°C Decrease	100 MW Increase
	Humidity - Dewpoint	> 16° C	1°C Increase	130 MW Increase
		10°C > and < 16° C	1°C Increase	20 MW Increase
		< 10°C	1°C Decrease	40 MW Increase
	Wind	Summer	1 km/hr Decrease	10 MW Increase
		Winter	1 km/hr Increase	20 MW Increase
	Cloud	Summer	Decrease of 1 on Scale	80 MW Increase
		Winter	Increase of 1 on Scale	80 MW Increase
Economic	Employment	Increase of 1,000 jobs	1 MW Increase	
	Housing Stock	Increase of 1,000 houses	1 MW Increase	
Calendar	Holidays	New Year's Day	2,900 MW Decrease	
		Good Friday	2,100 MW Decrease	
		Victoria Day	2,300 MW Decrease	
		Canada Day	1,000 MW Decrease	
		August Civic Holiday	1,500 MW Decrease	
		Labour Day	2,300 MW Decrease	
		Thanksgiving Day	2,500 MW Decrease	
		Remembrance Day	400 MW Decrease	
		Christmas	4,700 MW Decrease	
		Boxing Day	2,400 MW Decrease	
		New Year's Eve	1,100 MW Decrease	
		Week Between Christmas and New Years Eve	1,500 MW Decrease	
		Day of Week	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	1,700 MW Increase		
	Saturday vs Sunday	200 MW Increase		