Acquiring Operational Data from ISO New England Inc. Website

May 2, 2012

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Change History

Date	Changes
May 2, 2012	• Added Demand Reduction Threshold Price (DRTP) for the implementation of Price Responsive Demand transitional period on June 1, 2012. (see page 80) • Updated additional information regarding web services.
December 21, 2011	Updated to reflect web services.
March 21, 2011	Updated FRM Auction Results to reflect modifications effective Summer 2011.
January 31, 2011	Updated Real-Time Actual Scheduled Interchange Data report to reflect changes to report for consistency.
April 30, 2010	Added Morning Report, Seven Day Forecast, and Offer Threshold Price for implementation of Forward Capacity Market (FCM) on June 1, 2010.
November16, 2009	Modify DA LMP file naming convention.
July 1, 2009	Added sections on Competitive Offer Levels and Transmission Related Commitment and NCPC Reporting
January 30, 2009	• Removed the references to the www2
December 10, 2008	• Two Day Load Forecast is now a forecast of system demand for today and the following two days. A new URL has been assigned to the report. • Modified instructions for downloading five-minute and hourly LMP data • New report **available Friday, December 12, 2008**: Wholesale Load Cost Data
November 26, 2008	The Short Term Outage Report and Long Term Outage Report will be modified and published by the end of December 2008 due to recent changes in OP 3. Additional columns will be added to the Short Term report, and the Long Term Report will be automated to update once a day.
September 16, 2008	Added a new feature to the "Five-Minute LMP Data for Download" section and to the "Hourly LMP Data for Download" section. Added a new section called "Performance Strategies".
August 31, 2008	Added Squid Proxy Reference
November 9, 2007	Added section on Short Term Outage Report.
October 18, 2006	Changed the CSV Format Sample Data example found in the Reserve Requirements section.
September 28, 2006	Corrected URL (from: /forward_reserve_threshold_price.csv to: /forward_reserve_market_threshold_price.csv) found in the Forward Reserve Market Threshold Price section.
September 26, 2006	Corrected URL (from: /threshol/ to: /threshold/) found in the Forward Reserve Market Threshold Price section.
September 22, 2006	Added section on Forward Reserve Auction Results. Added section on Forward Reserve Market Threshold Price.
September 18, 2006	Corrected the location for the Location CSV file.
August 28, 2006	Changed the URLs for the "Current Five-Minute Reserve Zone Prices and Designations CSV download" and the "Current Hourly Reserve Zone Prices and Designations CSV download" within the "Location and Data Extraction Method" section of the "Reserve Zone Prices and Designations" area.
August 23, 2006	Removed the "Regulation MW" references from the "5-Minute Data" "Sample Data in CSV Format" section of the "Regulation Clearing Prices" area.
August 8, 2006	Updated the information about Day Ahead Prices (additional column). Updated CSV file formats for RCP and added information about the new Reserve Zone and Reserve Requirements reports. Fixed various text formatting problems.
March 8, 2006	Changed URL's from **www2.iso-ne.com** to **www.iso-ne.com. Corrected descriptions for the changes to the URL's.**

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Date	Changes
October 4, 2005	Updated the Location and Data Extraction Method portion of the Regulation Clearing Prices section of this document to be consistent with the filename convention being used for the preliminary hourly Regulation Clearing Prices report. Also added some clarifying language regarding the final version of the Regulation Clearing Prices report.
September 14, 2005	Added examples for new ASM Reports (three Regulation Clearing Prices reports – see pg. 47 – and the revised Day-Ahead Cleared Demand report – see pg. 40). The Day-Ahead Cleared Demand report replaces the Hourly Cleared Demand and Regulation Clearing Price report.
September 1, 2005	Changed to match new corporate document requirements.
June 28, 2005	Changed URL's from **www.iso-ne.com** to **www2.iso-ne.com**.
May 24, 2005	Changes for Load Forecast (new columns).
March 12, 2004	Explained versioned rt-lmp files.
February 19, 2004	Added note about Gzipping of the data on the 16th of each month.
January 17, 2004	Corrected file name for the Day Ahead Real Time LMP files.
December 17, 2003	Added section on LMP Monthly and Weekly Price indices. Added date that the Preliminary Real-Time file was discontinued.
August 19, 2003	Added section on Day-Ahead, Preliminary Real-Time, and Final Real-Time Hourly Binding Constraints Data report.
August 5, 2003	Added section on Hourly Cleared Demand and Regulation Clearing Price report.
August 1, 2003	New Effective Date: September 1, 2003 Added information on date fields in rolling hourly data file and rolling 5-minute data file, effective September 1, 2003. Corrected information on repeated 2AM hour for Daylight Saving Time (see pg. 12). Editorial and formatting changes.
July 11, 2003	Baseline version.

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Disclaimer

The information provided is accurate as of the date this document is released. ISO New England reserves the right to change the format of the data following 30 days advance notice to the participants. Changes are anticipated as ISO New England proceeds with standard market design and other changes to the operation and settlement of the New England Electricity Market (NEEM).

Any Perl scripts provided are available to the customers of ISO New England without guarantee of correctness. We have determined that they function as expected in our test environment. However, this may not be an indication that they will function as expected in other environments. The scripts are designed to serve as an example of an automated download. If they are run multiple times in an automatic fashion without modification, they may overwrite the results of prior runs, and data loss may result. Please use proper caution.

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Overview

This document explains how to automate the acquisition of publicly available operational data from the ISO New England website.

The opening sections of this document discuss information common across all data formats. Subsequent sections discuss the particulars of each report.

Procedures, formats, and interfaces discussed in this document are subject to change. In the event of a change, ISO New England will provide a minimum of 30 days advance notice to customers.

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Data Formats

CSV Format

CSV (Comma Separated Value) format is commonly used to exchange data among databases and spreadsheets on many computer platforms. Each line in a CSV file is a single record. Each record contains one or more fields, which are separated by commas. Some fields contain text data, and they are usually surrounded by quotation marks. Other fields contain numeric data, and they are not surrounded by quotation marks. (In this document, lines are sometimes shown as broken where they are not broken in the file, because of the constraints of the width of the paper).

In the files that ISO New England provides, there are several different types of records, including comment records, data records, version records, header records, and total records. The first field in each record shows its type:

First field	Record type
C or "C"	Comment
V or "V"	Version (timestamp)
H or "H"	Header information
D or "D"	Data
T or "T"	Total lines of data (record type D)

Comment records contain information about the data, or about the file. For instance, every CSV file that ISO New England provides contains a comment indicating the type of report it is. Other information commonly found in comments includes the day that the data covers or the dataset that the CSV file was generated from. **Version** records contain a timestamp showing when the data was last updated. **Header** records contain information about what data is stored in the data records, much like the titles of a set of columns in a spreadsheet. **Data** records contain the actual data stored in the CSV file. And finally, **Total** records contain the count of data records in the CSV file, to ensure that all the data intended to be in the CSV file actually is. Comment, Version, Header, and Total records are not included in this count.

Web Services

ISO New England also provides a RESTFul interface to energy and market data. The base path for these Web Services is **https://webservices.iso-ne.com/api/v1.0**

WADL is available here: **http://webservices.iso-ne.com/services/rs?_wadl&_type=xml**

We currently provide data feeds for:

- Preliminary Real-Time LMPs
- Preliminary Hourly LMPs
- Final Hourly LMPs
- Day-Ahead Hourly LMPs
- Actual System Demand
- Day-Ahead Constraints

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- Real-Time Constraints
- Interchanges
- Ancillary Services
- LMP Indices

ISO New **England Web Services** provides all data feeds in **XML** and **JSON** formats. The desired format can be specified either by adding the appropriate file extension to the request URL (.xml or .json), or by including the appropriate HTTP Accept Header (application/xml or application/json).

In order to utilize ISO New England's RESTFul interface, your client must support HTTP **Basic Authentication** over SSL. Registration for ISO New England's web services is required through **ISO Express** (isoexpress.iso-ne.com.

ISO New England's API Documentation (**https://webservices.iso-ne.com/docs/v1.0/**) provides a full list of services and data endpoints,

Time Formats and Localization

All date and time fields are in Eastern Standard Time or Eastern Daylight Time. Of special note is the shift to and from Daylight Saving Time, which is reflected in the spring by a shift from 1:59 A.M. to 3:00 A.M., and in the autumn by the repetition of the hour from 1:00 A.M. to 2:00 A.M. The second occurrence of hour-ending 02 is indicated in hourly data by the addition of an X (02X).

File Compression

On the 16th of each month (around midnight), the files for previous months will be compressed using Gzip. This will allow for faster downloads of the historical data as well as save disk space. Most standard windows tools for viewing Zip files can handle Gzip without any issues.

As an example, on February 16th, files older than February 1st will be compressed.

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Forecast System Demand

Data Available

The forecast system demand is made available for publishing, and updated as the forecast is updated. The forecast system demand, in megawatt-hours, is made available for the current day and the following two days.

Since the data is updated every day by 1000, there may be a lapse in time between midnight and 1000 before the data for the third day is populated. The “Hour End” data will normally range from 01 to 24. When Daylight Saving Time begins in the spring, there will be no hour ending 02; when Daylight Saving Time ends in the fall, there will be an extra hour ending 02, indicated by 02X.

The forecast system demand data set is reported in megawatt-hours, and reflects the forecast system demand for the indicated trading interval. For the current day, there are 2 additional columns. The Total Adj. MWh is the result of adjustments for OP-4 actions and cleared DA Load Response. Adjusted MWh is the Forecasted Demand minus Total Adj. MWh.

Sample Data in Tabular Format

The sample data set is smaller than the full set that is available. It is intended to serve as an example.

Forecast for 2008-12-10
(as of 2008-12-10 09:41:51 EST)

Trading Interval	Forecasted Demand			Forecasted Demand MWh			
				Day 2 12/11/08		Day 3 12/12/08	
Hour End	Native MWh	Total Adj MWh	Adjusted MWh	Hour End	MWh	Hour End	MWh
01	12310	0	12310	01	11630	01	12330
02	11740	0	11740	02	11170	02	11780
03	11440	0	11440	03	10960	03	11480
04	11380	0	11380	04	11000	04	11450
05	11680	0	11680	05	11370	05	11730
06	12770	0	12770	06	12570	06	12870
07	14940	0	14940	07	14910	07	15080
08	16280	0	16280	08	16400	08	16470
09	16640	0	16640	09	16740	09	16870

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Location and Data Extraction Method

This data set is available for interactive viewing in a Web browser at
http://www.iso-ne.com/op_fcstng/sys_load/loadForecast.do

No method currently exists for automatic download of these data.

Web Services

- /hourlyloadforecast
- /hourlyloadforecast/current
- /hourlyloadforecast/day/{day}
- /hourlyloadforecast/info

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Interactive Five-Minute LMP and Demand Data

Data Available

Preliminary five-minute and hourly locational marginal prices (LMPs) are made available in approximate real-time.

Pricing information is available interactively for each external node. For each location and each time interval (the most recent five minutes or the most recent hour), the LMP, the energy component of the price, the congestion component of the price, and the marginal loss component of the price, are available. In addition, the real-time total system demand is displayed, both instantaneously (within five minutes) and hourly.

Because the processes generating the LMP and the system demand data are distinct, they become unsynchronized. The time stamp of the most recent demand data point is displayed, or the notation "No Five-Minute/Hourly System Demand Data Available" when the data is too far out of synchronization to be useful.

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Sample Data in Tabular Format

These tables do not reflect the entire data set available, but serve as an example.

Instantaneous Total System Demand: 16085 MW
2006-03-06 15:40:03 EST

Location			LMP	Component		
ID	**Name**	**Type**	**LMP**	**Energy**	**Congestion**	**Marginal Loss**
4000	.H.INTERNAL_HUB	HUB	63.98	62.90	0.00	1.08
4001	.Z.MAINE	LOAD ZONE	60.43	62.90	0.00	-2.47
4002	.Z.NEWHAMPSHIRE	LOAD ZONE	61.64	62.90	0.00	-1.26
4003	.Z.VERMONT	LOAD ZONE	63.51	62.90	0.00	0.61
4004	.Z.CONNECTICUT	LOAD ZONE	64.41	62.90	0.00	1.51
4005	.Z.RHODEISLAND	LOAD ZONE	62.52	62.90	0.00	-0.38
4006	.Z.SEMASS	LOAD ZONE	62.74	62.90	0.00	-0.16
4007	.Z.WCMASS	LOAD ZONE	64.02	62.90	0.00	1.12

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Location and Data Extraction Method

These data sets are available for interactive viewing in a Web browser at **http://www.iso-ne.com/markets/5min_data/fiveMinLMP.do**. Hub components are summarized in the hub component data visible from the main page.

Please see the sections in this document titled “Five-Minute LMP Data for Download,” “Actual System Demand for Download,” and “Day-Ahead, Preliminary Real-Time, and Final Real-Time Hourly LMP Data” for automated download information.

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Five-Minute LMP Data for Download

Data Available

The five-minute LMPs for the past hour (rolling) and the latest five minutes for all pricing nodes are available. Data available include the energy component, congestion component, the loss component, and the LMP for that location for that five-minute interval. These data are updated every five minutes.

In addition, historical five-minute LMPs are available. These contain the same data as in the rolling hour report, but are published less frequently.

In both of these reports, only Location ID number identifies the location. This is done to reduce the size of the file as much as possible. A list of location IDs, location names, and location types is available separately, and is refreshed once daily.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates the wrapping. In the actual file, the lines would be continuous.

```
C,Five-Minute Locational Marginal Prices
C,Report generated 2006-03-06 15:46:35 EST
H,Location ID,Local Time,Energy Component,Congestion Component,Loss
   Component,LMP
H,Label,Time,$/MWh,$/MWh,$/MWh,$/MWh
D,335,2006-03-06 11:45:04,67.0,0.0,1.07,68.07
D,336,2006-03-06 11:45:04,67.0,0.0,0.93,67.93
D,337,2006-03-06 11:45:04,67.0,0.0,-0.77,66.23
D,339,2006-03-06 11:45:04,67.0,0.0,0.12,67.12
D,340,2006-03-06 11:45:04,67.0,0.0,-0.32,66.68
D,341,2006-03-06 11:45:04,67.0,0.0,0.12,67.12
D,342,2006-03-06 11:45:04,67.0,0.0,1.53,68.53
T,7 lines
```


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Location and Data Extraction Method

The rolling past hour 5-minute data file is available from **http://www.iso-ne.com/markets/5min_data/fiveMinLMP.do?submit=csv**. The latest 5-minute data file is available from **http://www.iso-ne.com/markets/5min_data/fiveMinLMP.do?submit=latest**. Both files are updated every five minutes. Please do not attempt to download these files at a frequency smaller than their update interval.

The filenames of the historical five-minute data depend on the date for which the data were generated, as a date stamp of YYYYMMDD. For instance, data for February 25, 2003, would have a date stamp of 20030225. Further, because of file size concerns, the historical data files are split up into six parts. The first part covers the hours from midnight to 4 am, the second part covers the hours from 4 am to 8am, the third part covers the hours from 8 am to noon, the fourth part covers the hours from noon to 4pm, the fifth part covers the hours from 4pm to 8pm, and the sixth part covers the hours from 8pm to midnight. These are reflected in the filename by hour indications 00-04, 04-08, 08-12, 12-16, 16-20, and 20-24, respectively. The URL for the CSV file will take the form **http://www.iso-ne.com/histRpts/5min-rt/lmp_5min_YYYYMMDD_HH-HH.csv**, where the HH-HH part indicates the beginning and ending hours. For example, the report for 8pm until 12am for February 25, 2003, would have a filename of **`lmp_5min_20030225_20-24.csv`**.

The location data file is available from **http://www.iso-ne.com/markets/5min_data/location.do** . It is updated nightly. Please do not attempt to download this file automatically, as it is only updated once daily.

Web Services

- /fiveminutelmp
- /fiveminutelmp/current
- /fiveminutelmp/current/all
- /fiveminutelmp/current/location/{locationId}
- /fiveminutelmp/current/locationType/{locationType}
- /fiveminutelmp/day/{day}/location/{locationId}
- /fiveminutelmp/info

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Hourly LMP Data for Download

Data Available

The hourly LMPs for the past three hours (rolling) and the latest hour for all pricing nodes are available. Data available include the energy component, congestion component, the loss component, and the LMP for that location for that hour interval. These data are updated every hour.

In addition, historical hourly LMPs are available. These contain the same data as in the rolling three-hour report, but are published less frequently.

In both of these reports, only Location ID number identifies the location. This is done to reduce the size of the file as much as possible. A list of location IDs, location names, and location types is available separately, and is refreshed once daily.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates the wrapping. In the actual file, the lines would be continuous.

```
C,Hourly Preliminary Locational Marginal Prices
C,Report generated 2006-03-06 15:46:35 EST
H,Local Date,Local Time,Location ID,Energy Component,Congestion Component,Loss
   Component,LMP
H,Date,Time,Label,$/MWh,$/MWh,$/MWh,$/MWh
D,09/11/2008,11,397,71.8,-2.49,-0.02,69.29
D,09/11/2008,11,398,71.8,-2.49,-0.02,69.29
D,09/11/2008,11,399,71.8,-2.49,-0.02,69.29
D,09/11/2008,11,400,71.8,-2.49,-0.02,69.29
D,09/11/2008,11,401,71.8,-2.49,0.61,69.92
D,09/11/2008,11,405,71.8,-2.49,-4.63,64.68
D,09/11/2008,11,407,71.8,-2.49,-7.69,61.62
D,09/11/2008,11,410,71.8,-2.49,0.85,70.16
T,7 lines
```

Location and Data Extraction Method

The rolling past hour three-hour hourly data file is available from **http://www.iso-ne.com/markets/hrly_data/hourlyLMP.do?submit=csv**. The latest hour data file is available from **http://www.iso-ne.com/markets/hrly_data/hourlyLMP.do?submit=latest**. Both files are updated every hour. Please do not attempt to download these files at a frequency smaller than their update interval.

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Web Services

- /hourlylmp/da/final
- /hourlylmp/da/final/current
- /hourlylmp/da/final/current/all
- /hourlylmp/da/final/current/location/{locationId}
- /hourlylmp/da/final/day/{day}/location/{locationId}
- /hourlylmp/da/final/info
- /hourlylmp/rt/final
- /hourlylmp/rt/final/day/{day}/location/{locationId}
- /hourlylmp/rt/final/info

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Actual System Demand for Download

Data Available

System demand data is available with two degrees of granularity: instantaneous snapshots, taken approximately every five minutes, or hourly aggregates. The CSV files are updated on an ongoing basis.

Sample Data in CSV Format

```
"C","Total Five-Minute System Demand"
"C","Report for 03/06/2006"
"C","Report generated Mon Mar  6 15:59:33 2006"
"H","Local Date/Time","Total Demand"
"H","Date/Time","MW"
"D","2006-03-06 00:02:49",12792
"D","2006-03-06 00:07:50",12751
"D","2006-03-06 00:12:56",12738
"D","2006-03-06 00:17:58",12667
"D","2006-03-06 00:22:58",12596
"D","2006-03-06 00:28:03",12567
"D","2006-03-06 00:33:04",12546
"T","7 lines"

"C","Total Hourly System Demand"
"C","Report for 12/29/2005"
"C","Report generated Fri Dec 30 00:10:12 2005"
"H","Local Date","Hour Ending","Total Demand"
"H","Date","HE","MWh"
"D","2005-12-29","01",12853
"D","2005-12-29","02",12388
"D","2005-12-29","03",12066
"D","2005-12-29","04",11946
"D","2005-12-29","05",12099
"D","2005-12-29","06",12840
"D","2005-12-29","07",13612
"T","7 lines"
```


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Location and Data Extraction Method

Five-minute demand data sets are available by automatically downloading **http://www.iso-ne.com/histRpts/5min-demand/demand_5min_YYYYMMDD.csv**. Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data. Five-minute historical data can also be downloaded interactively from **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Fivemin**.

Hourly demand data sets are available by automatically downloading http://www.iso-ne.com/histRpts/hourly-demand/demand_hourly_YYYYMMDD.csv. Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data. Five-minute historical data can also be downloaded interactively from the calendar listing at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly**.
To retrieve hourly data for a specific date range: **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?initial=false&startDate=MM/DD/YYYY&endDate=MM/DD/YYYY&selectedHourlyItems=allhourly**
To retrieve fivemin data for a specific date range: **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?initial=false&startDate= MM/DD/YYYY&endDate= MM/DD/YYYY &selectedFiveminItems=allfivemin**

Note: You will need to replace the MM/DD/YYYY in the given URL with the date stamp for the dates that you are seeking data.

Web Services

- /fiveminutesystemload
- /fiveminutesystemload/current
- /fiveminutesystemload/day/{day}
- /fiveminutesystemload/info

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Day-Ahead, and Final Real-Time Hourly LMP Data

Data Available

For each location and each time interval in a day, the LMP, with the energy component of the price, the congestion component of the price, and the marginal loss component of the price, is available.

There are two types of hourly LMP data. Day-Ahead LMPs are published the day before in conjunction with the day-ahead market clearing. Finalized LMP data sets have been reviewed, and may have been adjusted from the preliminary values in accordance with Manual 11. In very extreme circumstances, finalized LMP data may be amended and republished.

These data are available in several different ways. Reports containing the day-ahead data, the preliminary data, and the finalized data for a day are available in CSV format. In addition, the most current three hours of preliminary data are made available in a rolling archive with a slightly different format. See the section, “Rolling Archive of Preliminary Real-Time Data,” for more information.

See the section, “Combined Day-Ahead and Preliminary Real-Time Report,” for information about the report that combines the two data sets.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

This example data is taken from a finalized LMP data file. The formatting of the data in the other varieties of CSV file is identical. The only difference will be the first line, which identifies the type of report.

```
"C","Real-Time Hourly Locational Marginal Prices, Final version"
"C","Report for 03/05/2006"
"C","Prices approved 2006-03-06 19:24:51 GMT"
"C","Report generated Mon Mar  6 14:32:18 2006"
"H","Local Date","Local Hour End","Location ID","Location Name","Location
   Type","Locational Marginal Price","Energy Component","Congestion
   Component","Marginal Loss Component"
"H","YYYY-MM-DD","Hour
   End","ID","Description","Description","$MWh","$MWh","$MWh","$MWh"
"D","2006-03-05","01","4000",".H.INTERNAL_HUB","HUB",49.81,49.33,0,.48
"D","2006-03-05","01","6352","HC.AYER    115","HUB NODE",48.88,49.33,0,-.45
"D","2006-03-05","01","6353","HC.CARPTRHL115","HUB NODE",48.91,49.33,0,-.42
"D","2006-03-05","01","6354","HC.CARPTRHL345","HUB NODE",49.02,49.33,0,-.31
"D","2006-03-05","01","6355","HC.LUDLOW  345","HUB NODE",49.49,49.33,0,.16
"D","2006-03-05","01","6356","HC.MILLBURY115","HUB NODE",50.01,49.33,0,.68
"D","2006-03-05","01","6357","HC.MILLBURY345","HUB NODE",48.76,49.33,0,-.57
"T","7 lines"
```


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Location and Data Extraction Method

All of the LMP data sets are available for interactive viewing from the historical archive of hourly data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly** . You can simply select the reports you wish to download by placing a check mark next to the report, adding a date range and clicking on the Display Results button.

The selected reports will be sorted by date. Click on the required report for the requested date. The most recent version of each file can be downloaded from the following locations.

Day-Ahead data sets are available by automatically down loading **http://www.iso-ne.com/histRpts/da-lmp/WW_DALMP_ISO_YYYYMMDD.csv** Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data.

The latest version of the finalized real-time data is available from **http://www.iso-ne.com/histRpts/rt-lmp/lmp_rt_final_YYYYMMDD.csv**. Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data.

For each of these file types, there is a versioned file. This file will have a name like **http://www.iso-ne.com/histRpts/rt-lmp/lmp_rt_final_YYYYMMDD_yyyymmddhhmmss.csv**. The reason these files exist is so that people can see the historical information about any data that has been re-finalized. The file **http://www.iso-ne.com/histRpts/rt-lmp/lmp_rt_final_YYYYMMDD.csv** points to a versioned file. If the report is updated (refinalized, etc.) then the **http://www.iso-ne.com/histRpts/rt-lmp/lmp_rt_final_YYYYMMDD.csv** file gets pointed to the *new* **http://www.iso-ne.com/histRpts/rt-lmp/lmp_rt_final_YYYYMMDD_yyyymmddhhmmss.csv**.

To retrieve hourly data for a specific date range: **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?initial=false&startDate=MM/DD/YYYY&endDate=MM/DD/YYYY&selectedHourlyItems=allhourly**

Note: You will need to replace the MM/DD/YYYY in the given URL with the date stamp for the dates Stamp for the dates that you are seeking data.

Web Services

- /hourlylmp/da/final
- /hourlylmp/da/final/current
- /hourlylmp/da/final/current/all
- /hourlylmp/da/final/current/location/{locationId}
- /hourlylmp/da/final/day/{day}/location/{locationId}
- /hourlylmp/da/final/info

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Combined Day-Ahead and Preliminary Real-Time Report

Data Available

For each location and each time interval in a day, the LMP, with the energy component of the price, the congestion component of the price, and the marginal loss component of the price, is available.

There are three types of hourly LMP data. Day-Ahead LMP prices are published the day before in conjunction with the day-ahead market clearing. Preliminary LMP prices are published as soon as is practical after the hour has concluded. Finalized LMP data sets have been reviewed, and may have been adjusted from the preliminary values in accordance with Manual 11. In very extreme circumstances, finalized LMP data may be amended and republished.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.
This example data is taken from a preliminary LMP data file. The formatting of the data in the other varieties of CSV file is identical. The only difference will be the first line, which identifies the type of report.

```
"C","Day-Ahead & Preliminary Real-Time Locational Marginal Prices"
"C","Report for 02/26/2006"
"C","Report generated Mon Feb 27 00:13:08 2006"
"H","","","","","","Day-Ahead","Day-Ahead","Day-Ahead","Day-Ahead","Real-
   time","Real-time","Real-time","Real-time"
"H","Local Date","Local Hour End","Location ID","Location Name","Location
   Type","Locational Marginal Price","Energy Component","Congestion
   Component","Marginal Loss Component","Locational Marginal Price","Energy
   Component","Congestion Component","Marginal Loss Component"
"H","YYYY-MM-DD","Hour
   End","ID","Description","Description","$MWh","$MWh","$MWh","$MWh","$MWh","
   $MWh","$MWh","$MWh"
"D","2006-02-
   26","01","4000",".H.INTERNAL_HUB","HUB",73.08,72.45,0,.63,63.16,62.51,0,.6
   5
"D","2006-02-26","01","6352","HC.AYER    115","HUB NODE",71.32,72.45,0,-
   1.13,61.66,62.51,0,-.85
"D","2006-02-26","01","6353","HC.CARPTRHL115","HUB NODE",72.33,72.45,0,-
   .12,62.43,62.51,0,-.08
"D","2006-02-26","01","6354","HC.CARPTRHL345","HUB NODE",72.13,72.45,0,-
   .32,62.21,62.51,0,-.3
"D","2006-02-26","01","6355","HC.LUDLOW  345","HUB NODE",72.35,72.45,0,-
   .1,62.66,62.51,0,.15
"D","2006-02-26","01","6356","HC.MILLBURY115","HUB
   NODE",73.52,72.45,0,1.07,63.7,62.51,0,1.19
"D","2006-02-26","01","6357","HC.MILLBURY345","HUB NODE",70.86,72.45,0,-
```

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```
   1.59,61.79,62.51,0,-.72
"T","7 lines"
```

Location and Data Extraction Method

All of the LMP data sets are available for interactive viewing from the historical archive of hourly data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly**. Place a check mark next to Day-Ahead and Preliminary Real-Time LMPs, choose a date range and click on Display Results. The selected reports will be sorted by date. Click on the required report for the requested date.

The most recent version of each file can be downloaded using a URL of the form: http://www.iso-ne.com/histRpts/rolling-dart/da_rt_lmp_YYYYMMDD.csv. Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data.

To retrieve hourly data for a specific date range: **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?initial=false&startDate=MM/DD/YYYY&endDate=MM/DD/YYYY&selectedHourlyItems=allhourly**

Note: You will need to replace the MM/DD/YYYY in the given URL with the date stamp for the dates Stamp for the dates that you are seeking data. Rolling Archive of Five-Minute and Preliminary Real-Time Data

Web Services

- /hourlylmp/rt/prelim
- /hourlylmp/rt/prelim/current
- /hourlylmp/rt/prelim/current/all
- /hourlylmp/rt/prelim/current/location/{locationId}
- /hourlylmp/rt/prelim/day/{day}/location/{locationId}
- /hourlylmp/rt/prelim/info
- /hourlylmp/rt/prelim/previous
- /hourlylmp/rt/prelim/previous/all

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Real-Time Market External Interface Data

Data Available

Real-time external interface data sets are available, including the actual flow, import limit, current schedule, and purchase or sale prices for each of the external system interfaces. The data on the interactive web page and in the CSV files are updated approximately every five minutes.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Real-Time Market Actual Scheduled Interchange
C,Report generated: 2006-03-07 12:22:23 EST
H,Interface Name,Hour Beginning (Local),Actual Flow,Import Limit,Export
   Limit,Current Scheduled,Purchase,Sale
H,Label,Date/Time,MWh,MWh,MWh,MWh,MWh,MWh
D,Highgate,2006-03-07 12:21:22 EST,-205.3,-218.0,0.0,-210.0,-210.0,0.0
D,Highgate,2006-03-07 12:16:20 EST,-208.6,-218.0,0.0,-210.0,-210.0,0.0
D,Highgate,2006-03-07 12:11:19 EST,-204.2,-218.0,0.0,-210.0,-210.0,0.0
D,Highgate,2006-03-07 12:06:18 EST,-206.1,-218.0,0.0,-210.0,-210.0,0.0
D,Highgate,2006-03-07 12:01:13 EST,-210.8,-218.0,0.0,-210.0,-210.0,0.0
D,Highgate,2006-03-07 11:56:12 EST,-206.5,-218.0,0.0,-210.0,-210.0,0.0
D,Highgate,2006-03-07 11:51:06 EST,-208.8,-218.0,0.0,-210.0,-210.0,0.0
T,7 lines
```


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Sample Data in Tabular Format

2006-03-07 12:16:20 EST

Interface Name	CSV	Actual Flow	Import Limit	Export Limit	Current Schedule	Purchase	Sale
Cross Sound Cable	CSV	331	-346	330	330	0	330
Highgate	CSV	-209	-218	0	-210	-210	0
New Brunswick	CSV	-63	-700	136	-69	-100	31
New York AC	CSV	20	-1400	1200	-34	-277	243
Phase I/II	CSV	-1286	-2000	1200	-1284	-1284	0

Location and Data Extraction Method

Current five-minute data sets are available interactively at **http://www.iso-ne.com/markets/5min_data/extInterfaceSummary.do**. To see a particular interface's data for the day so far, you can click on the names of the interface. You can also download CSV data interactively from the table by clicking on the CSV icon.

The 5-minute interchange data sets are not available for automated download in CSV format, and no historical data are made available except for data from the current day.

Web Services

- /fiveminuteexternalflow
- /fiveminuteexternalflow/current
- /fiveminuteexternalflow/current/location/{locationId}
- /fiveminuteexternalflow/current/locationType/{locationType}
- /fiveminuteexternalflow/day/{day}/location/{locationId}
- /fiveminuteexternalflow/info

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Real-Time Interchange Transaction Request Data

Data Available

The data sets available are an aggregate of the interchange transaction requests on an hourly basis. There are purchase, sale, and net figures available for each trading interval and each interchange. This information is updated once a day.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Daily Net Interchange of Real-Time Transaction Requests
C,Report generated 2006-03-07 12:26:46 EST
H,Interface Name,Local Date,Local Hour Ending,Purchases,Sales,Net
H,Label,Date,Hour End,MWh,MWh,MWh
D,Cross Sound Cable,2006-03-07,01,0,300,300
D,Cross Sound Cable,2006-03-07,02,0,150,150
D,Cross Sound Cable,2006-03-07,03,0,150,150
D,Cross Sound Cable,2006-03-07,04,0,150,150
D,Cross Sound Cable,2006-03-07,05,0,150,150
D,Cross Sound Cable,2006-03-07,06,0,330,330
D,Cross Sound Cable,2006-03-07,07,0,330,330
C,Published Daily Net Interchange is based on all Approved Real-Time
   transactions received by 1600 the day before the Dispatch day.  As such it
   is possible for these values to exceed the forecasted interface limits.
   These values do not reflect those used for dispatch or settlement of the
   Real-Time Market.
T,7 lines
```


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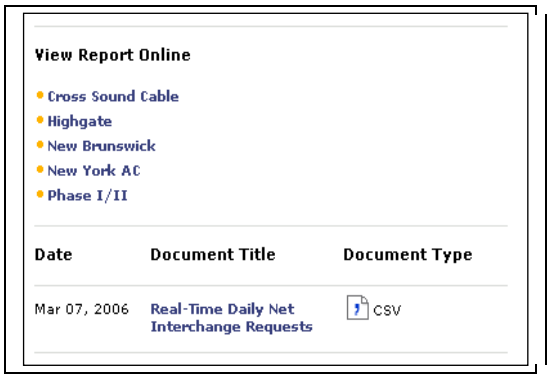
Sample Data in Tabular Format



Location and Data Extraction Method

The current day's information is available interactively at **http://www.iso-ne.com/sys_ops/rt_intrchng/dailyInterchangeRequest.do**. By clicking on the names of the interchanges, you can see data for each of the interchanges, or download the current day's data in CSV format.

Historical data is also available from http://www.iso-ne.com/histRpts/forecast-interchange/fcst_int_YYYYMMDD.csv**.** Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data. This historical data can also be downloaded interactively from the calendar listing at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Interchange**.

To retrieve interchange data for a specific date range: **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?initial=false&startDate= MM/DD/YYYY&endDate=MM/DD/YYYY&selectedInterchangeItems=allInterchange**

Note: You will need to replace the MM/DD/YYYY in the given URL with the date stamp for the dates that you are seeking data.

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Real-Time Actual Scheduled Interchange

Data Available

The net interchange is available for each trading interval at each interchange. This information is updated hourly for each of the interchanges.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Real-Time Market Actual Scheduled Interchange,,,,,
C,Report generated 2011-01-27 09:42:06 EST,,,,,
H,Interface Name,Local Date,Local Hour Ending,Purchase,Sales,Actual
   Interchange
H,Label,Date,Hour End,MWh,MWh,MWh
D,NY NNC,12/10/2010,1,-1,100,99
D,NY NNC,12/10/2010,2,-1,50,49
D,NY NNC,12/10/2010,3,-1,50,49
D,NY NNC,12/10/2010,4,-1,25,24
D,NY NNC,12/10/2010,5,-1,25,24
D,NY NNC,12/10/2010,6,-1,25,24
D,NY NNC,12/10/2010,7,0,50,50
D,NY NNC,12/10/2010,8,0,0,100
D,NY NNC,12/10/2010,9,0,0,101
D,NY NNC,12/10/2010,10,0,0,100
C,The data in this report is based on real-time market dispatch data and may
   differ from that reflected in the real-time market settlement.,,,,,
T,10 lines,,,,,
```

Sample Data in Tabular Format

Interchange - NY NNC
Real Time Market Daily Actual Scheduled Interchange
(as of 2010-12-10 20:00:00 EST)

Trading Interval	Purchase (MWh)	Sales (MWh)	Interchange (MWh)
01	-1	100	99
02	-1	50	49
03	-1	50	49
04	-1	25	24
05	-1	25	24
06	-1	25	24
07	0	50	50

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Location and Data Extraction Method

The current day's data are available interactively at **http://www.iso-ne.com/sys_ops/rt_intrchng/dailyInterchangeActual.do**. By clicking on the names of the interchanges, you can see data for each of the interchanges, or download the current day's data in CSV format.

To retrieve data for only one interface, the above URL has to be added with location id parameter. **http://www.iso-ne.com/sys_ops/rt_intrchng/dailyInterchangeActual.do?locationid=4014**

List of Interface Names and Location IDs

Interface Name	Location Id
Cross Sound Cable	4014
HQ-Highgate	4013
NY NNC	4017
NY Northern AC	4011
New Brunswick	4010
HQ-Phase I/II	4012

Historical data is also available from http://www.iso-ne.com/histRpts/actual-interchange/act_int_YYYYMMDD.csv**.** Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data. This historical data can also be downloaded interactively from the calendar listing at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Interchange**.

Web Services

- /actualinterchange
- /actualinterchange/current
- /actualinterchange/current/location/{locationId}
- /actualinterchange/current/locationType/{locationType}
- /actualinterchange/day/{day}/location/{locationId}
- /actualinterchange/info

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Selectable Hourly LMP Data

Data Available

The user may select a location from among nodes (including hub components), interfaces, zones, or the hub itself. The user may select a date range of up to 45 days. The user may then download a report containing the day-ahead and preliminary or final prices (including the LMP and the energy, loss, and congestion components of the price). Real-time data is clearly identified as Final or Preliminary.

All data is available for 12 months.

If the user selects a date range, which contains hours in the future, which will not have preliminary real-time prices yet, blanks will be displayed. If a date within the date range that the user has selected has no data associated with it, a line will be written to the report indicating that no data for that date is available. Within the body of the file, no data for those dates will appear.

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Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,LMP prices for Day-ahead and Real-time
C,Time period:      03/07/2006-03/07/2006
C,Location/Node:    .H.INTERNAL_HUB(4000)
C,Report generated: 2006-03-07 14:32:28 EST
H,,,Day Ahead,Day Ahead,Day Ahead,Day Ahead,Real Time,Real Time,Real Time,Real
   Time,Real Time
H,Date,Hour
   Ending,LMP,Energy,Loss,Congestion,LMP,Energy,Loss,Congestion,Status
D,03/07/2006,01,44.82,44.43,0.38,0.01,42.98,42.31,0.67,0.0,PRELIM
D,03/07/2006,02,45.01,44.63,0.38,0.0,42.71,42.01,0.7,0.0,PRELIM
D,03/07/2006,03,42.03,41.54,0.35,0.14,45.95,45.2,0.75,0.0,PRELIM
D,03/07/2006,04,44.33,43.92,0.38,0.03,44.61,43.87,0.74,0.0,PRELIM
D,03/07/2006,05,45.86,45.47,0.39,0.0,39.43,38.79,0.64,0.0,PRELIM
D,03/07/2006,06,53.11,52.61,0.45,0.05,51.33,50.53,0.8,0.0,PRELIM
D,03/07/2006,07,66.49,65.79,0.56,0.14,66.66,65.75,0.91,0.0,PRELIM
D,03/07/2006,08,70.5,69.71,0.67,0.12,74.95,74.04,0.91,0.0,PRELIM
D,03/07/2006,09,70.37,69.11,0.66,0.6,57.93,57.18,0.75,0.0,PRELIM
D,03/07/2006,10,73.42,72.3,0.7,0.42,60.23,59.4,0.83,0.0,PRELIM
D,03/07/2006,11,70.27,69.02,0.67,0.58,63.42,62.58,0.84,0.0,PRELIM
D,03/07/2006,12,70.11,68.91,0.68,0.52,61.5,60.71,0.79,0.0,PRELIM
D,03/07/2006,13,66.28,64.87,0.64,0.77,54.53,53.82,0.71,0.0,PRELIM
D,03/07/2006,14,61.87,60.69,0.6,0.58,54.31,53.59,0.72,0.0,PRELIM
D,03/07/2006,15,60.41,59.34,0.59,0.48
D,03/07/2006,16,55.4,54.86,0.54,0.0
D,03/07/2006,17,59.6,58.63,0.57,0.4
D,03/07/2006,18,71.97,71.39,0.69,-0.11
D,03/07/2006,19,87.0,88.32,0.83,-2.15
D,03/07/2006,20,78.77,79.37,0.75,-1.35
D,03/07/2006,21,70.0,69.11,0.64,0.25
D,03/07/2006,22,63.21,62.04,0.59,0.58
D,03/07/2006,23,53.6,53.09,0.51,0.0
D,03/07/2006,24,54.58,54.12,0.46,0.0
T,24 lines
```

Location and Data Extraction Method

This data is available for interactive download at http://www.iso-ne.com/markets/hrly_data/selectHourlyLMP.do . When the data set is downloaded, the filename will be OI_darthrlmp_iso_LLLL_YYYYMMDD-YYYYMMDD_YYYYMMDDTTTTTT.csv with the LLLL being replaced by the location ID selected for download and the YYYYMMDD-YYYYMMDD being replaced by date stamps indicating the range selected for download and the final YYYYMMDDTTTTTT reflecting the GMT date and time the report was created for downloading.

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Selectable Hourly Load Data

Data Available

The user may select a location from among nodes (including hub components), interfaces, zones, or the hub itself. The user may select a date range of up to 45 days. The user may then download a report containing day-ahead and real-time demand data. Day-ahead values represent total demand, similar to the values displayed for the total system in the eMkt interface. This value is the total of the cleared demand (price-sensitive and fixed) and decrements net of cleared increments within the zone or hub. Real-time values represent the total real-time load obligation demand (not including pumping) within the zone. The hub will not have any real-time values associated with its location and thus will have the real-time columns showing blanks.

Data is available for 12 months after its generation.

Real-time data will not be available until settlements have been approved for the day. If the user selects a date range, which contains hours that have not yet been settled, blanks will be displayed. If a date within the date range that the user has selected has no data associated with it, a line will be written to the report indicating that no data for that date is available. As one possible reason for a lack of data is no day-ahead bids having been submitted for that day, within the body file, zeroes will appear for each hour of that day.

Sample Data in CSV Format

- Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Load Hourly Data for Day-ahead and Real-time
C,Time period:      02/26/2006-02/27/2006
C,Location/Node:    .Z.RHODEISLAND(4005)
C,Report generated:2006-03-07 14:43:27 EST
H,,,Day Ahead,Real Time
H,Date,Hour ending,MWH,MWH
D,02/26/2006,01,828.7,796.8
D,02/26/2006,02,866.3,769.1
D,02/26/2006,03,781.7,749.9
D,02/26/2006,04,862.0,742.1
D,02/26/2006,05,777.7,747.7
D,02/26/2006,06,784.8,769.1
D,02/26/2006,07,828.4,794.1
D,02/26/2006,08,870.1,827.7
D,02/26/2006,09,943.9,873.1
D,02/26/2006,10,1068.2,919.1
D,02/26/2006,11,990.8,949.0
D,02/26/2006,12,1002.3,965.8
D,02/26/2006,13,992.3,964.3
D,02/26/2006,14,961.5,951.8
D,02/26/2006,15,937.3,948.9
D,02/26/2006,16,932.9,950.9
D,02/26/2006,17,1002.5,980.8
```


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```
D,02/26/2006,18,1055.3,1068.2
D,02/26/2006,19,1046.6,1145.8
D,02/26/2006,20,1157.1,1132.3
D,02/26/2006,21,1094.0,1096.4
D,02/26/2006,22,1038.8,1034.4
D,02/26/2006,23,1043.3,953.4
D,02/26/2006,24,1006.3,873.6
D,02/27/2006,01,813.5,829.4
D,02/27/2006,02,794.0,807.7
D,02/27/2006,03,785.9,797.7
D,02/27/2006,04,781.3,802.1
D,02/27/2006,05,786.5,822.8
D,02/27/2006,06,828.9,895.8
D,02/27/2006,07,1003.9,1018.3
D,02/27/2006,08,1090.4,1111.5
D,02/27/2006,09,1116.9,1148.5
D,02/27/2006,10,1139.7,1168.6
D,02/27/2006,11,1144.3,1177.2
D,02/27/2006,12,1125.2,1173.9
D,02/27/2006,13,1101.4,1167.1
D,02/27/2006,14,1084.8,1147.6
D,02/27/2006,15,1077.8,1131.1
D,02/27/2006,16,1056.8,1108.1
D,02/27/2006,17,1137.8,1126.1
D,02/27/2006,18,1216.4,1202.1
D,02/27/2006,19,1143.6,1275.0
D,02/27/2006,20,1189.7,1249.1
D,02/27/2006,21,1146.4,1201.9
D,02/27/2006,22,1116.1,1125.8
D,02/27/2006,23,1015.5,1012.8
D,02/27/2006,24,898.5,916.7
T,48 lines
```

Location and Data Extraction Method

This data is available for interactive download at **http://www.iso-ne.com/markets/hrly_data/selectHourlyLoad.do**. When the data set is downloaded, the filename will be OI_darthrmwh_iso_LLLL_YYYYMMDD-YYYYMMDD_YYYYMMDDTTTTTT.csv with the LLLL being replaced by the location ID selected for download and the YYYYMMDD-YYYYMMDD being replaced by date stamps indicating the range selected for download and the final YYYYMMDDTTTTTT reflecting the date and time the report was created for downloading.

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Hourly Cleared Demand and Regulation Clearing Price (before October 1, 2005)

Data Available

This report contains the hourly Regulation Clearing Price and Hourly Cleared Day-Ahead Demand for a given day.

The Regulation Clearing Price is generated as a result of a business process within the ISO New England Operations Forecast Office. This data is also available in eMkt. This report was retired with the implementation of the first phase of the Ancillary Services Market (ASM) project in October 2005 and replaced by the Hourly Cleared Demand report.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
"C","Day-Ahead Cleared Demand and Regulation Clearing Prices"
"C","Report for 01/27/2005"
"C","Report generated Wed Jan 26 18:35:56 2005"
"H","Local Date","Local Hour Ending","Day-Ahead Cleared Demand","Regulation
   Clearing Price"
"H","YYYY-MM-DD","Hour End","MWh","$/MWh"
"D","2005-01-27","01",14077,44.18
"D","2005-01-27","02",13940,36.46
"D","2005-01-27","03",13802,36.96
"D","2005-01-27","04",13882,36.46
"D","2005-01-27","05",14278,35.71
"D","2005-01-27","06",15164,36.74
"D","2005-01-27","07",17290,49.62
"D","2005-01-27","08",18851,26.52
"D","2005-01-27","09",18873,19.54
"D","2005-01-27","10",18770,18.8
"D","2005-01-27","11",18733,19.6
"D","2005-01-27","12",18584,32.48
"D","2005-01-27","13",18502,25.59
"D","2005-01-27","14",18257,25.4
"D","2005-01-27","15",18291,25
"D","2005-01-27","16",18273,32.22
"D","2005-01-27","17",19211,18
"D","2005-01-27","18",20526,18
"D","2005-01-27","19",20709,18
"D","2005-01-27","20",19975,18
"D","2005-01-27","21",19461,18
"D","2005-01-27","22",18431,23.39
"D","2005-01-27","23",17018,46.78
"D","2005-01-27","24",15157,44.26
"T","24 lines"
```


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Location and Data Extraction Method

All of the Hourly Cleared Demand and Regulation Clearing Prices data sets are available for interactive viewing from the historical archive of hourly data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly**. You can simply place a check mark next to Day-Ahead Hourly Cleared Demand and Regulation Prices, choose a date range and click the Display Results button. Click on the required report for the requested date.

The most recent version of each file can be downloaded from **http://www.iso-ne.com/histRpts/hcd-reg/da_demand_reg_YYYYMMDD.csv.** Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data.

To retrieve hourly data for a specific date range: **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?initial=false&startDate=MM/DD/YYYY&endDate=MM/DD/YYYY&selectedHourlyItems=allhourly**

Note: You will need to replace the MM/DD/YYYY in the given URL with the date stamp for the dates that you are seeking data.

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Day-Ahead Cleared Demand (as of October 1, 2005)

Data Available

This report contains the hourly Day-Ahead Cleared Demand for a given day. It replaces the Hourly Cleared Demand and Regulation Clearing Price report with the implementation of the first phase of ASM in October of 2005.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
"C","Day-Ahead Cleared Demand"
"C","Report for 12/27/2005"
"C","Report generated Mon Dec 26 16:01:29 2005"
"H","Local Date","Local Hour Ending","Day-Ahead Cleared Demand"
"H","YYYY-MM-DD","Hour End","MWh"
"D","2005-12-27","01",11892
"D","2005-12-27","02",11414
"D","2005-12-27","03",11423
"D","2005-12-27","04",11492
"D","2005-12-27","05",11767
"D","2005-12-27","06",12069
"D","2005-12-27","07",14200
"D","2005-12-27","08",16000
"D","2005-12-27","09",16907
"D","2005-12-27","10",17138
"D","2005-12-27","11",17076
"D","2005-12-27","12",16948
"D","2005-12-27","13",16697
"D","2005-12-27","14",16517
"D","2005-12-27","15",16350
"D","2005-12-27","16",16234
"D","2005-12-27","17",18120
"D","2005-12-27","18",18999
"D","2005-12-27","19",18895
"D","2005-12-27","20",18248
"D","2005-12-27","21",17424
"D","2005-12-27","22",16304
"D","2005-12-27","23",14875
"D","2005-12-27","24",12801
"T","24 lines"
```


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Location and Data Extraction Method

All of the Day-Ahead Hourly Cleared Demand data sets are available for interactive viewing from the historical archive of hourly data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly**. Simply place a check mark next to Hourly Day-Ahead Cleared Demand, choose a date range and click the Display Results button. Click on the required report for the requested date.

The most recent version of each file can be downloaded from **http://www.iso-ne.com/histRpts/da-hcd/da_demand_YYYYMMDD.csv .** Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data.

To retrieve hourly data for a specific date range: **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?initial=false&startDate=MM/DD/YYYY&endDate=MM/DD/YYYY&selectedHourlyItems=allhourly**

Note: You will need to replace the MM/DD/YYYY in the given URL with the date stamp for the dates that you are seeking data.

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Day-Ahead, Preliminary Real-Time, and Final Real-Time Hourly Binding Constraints Data

Data Available

There are three types of hourly binding constraints data.

1. Day-Ahead Binding Constraints data is published the day before in conjunction with the Day-Ahead clearing and synchronized with the publication of the Day-Ahead LMP data. Day-Ahead Binding Constraints data values are consistent in content with the data available within eMkt.
2. Preliminary Real-Time Binding Constraints data is published as soon as is practical after each hour within the current operating day. At the conclusion of the day, a full set of 24 hours of Preliminary Real-Time Binding Constraints data exists for the day.
3. Finalized Real-Time Binding Constraints data sets have been reviewed and may have been adjusted from the Preliminary values in accordance with Manual 11. Publication of the Finalized Real-Time Binding Constraints is synchronized with the publication of the corresponding Finalized Real-Time LMP data.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
"C","Day-Ahead Binding Constraints"
"C","Report for 08/07/2006"
"C","Report generated Mon Aug 6 16:01:27 2006"
"H","Local Date","Hour Ending","Constraint Name","Contingency
   Name""H","Date","HE","Name","Name"
"D","2006-08-07","07","NRST","Interface""D","2006-08-
   07","08","NRST","Interface"
"D","2006-08-07","09","NRST","Interface"
"D","2006-08-07","10","NRST","Interface"
"D","2006-08-07","11","NRST","Interface"
"D","2006-08-07","12","NRST","Interface"
"D","2006-08-07","13","NRST","Interface"
"T","7 lines"

"C","Real-Time Binding Constraints, Preliminary Version"
"C","Report for 08/07/2006"
"C","Binding Constraints have no approval time when preliminary"
"C","Report generated Tue Aug 08 23:58:22 2006"
"H","Local Date","Hour Ending","Constraint Name","Contingency Name","Interval
   for Marginal Value","Margial Value"
"H","Date","HE","Name","Name","Time","$/Mwh"
"D","2005-12-27","18","BASE_INTRFC_NRST","BASE",”18:05:06”,158.95
"D","2005-12-27","19","BASE_INTRFC_NRST","BASE",”19:35:04”,158.99
"T","2 lines"
```


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```
"C","Real-Time Binding Constraints, Final Version"
"C","Report for 08/07/2006"
"C","Binding Constraints approved 2006-08-09 16:28:09 GMT"
"C","Report generated Thu Aug 10 20:04:06 2006"
"H","Local Date","Hour Ending","Constraint Name","Contingency Name"
"H","Date","HE","Name","Name"
"D","2006-08-07","18","BASE_INTRFC_NRST","BASE"
"D","2006-08-07","19","BASE_INTRFC_NRST","BASE"
"T","2 lines"
```

Location and Data Extraction Method

All of the binding constraints data sets are available for interactive viewing from the historical archive of hourly data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly**. Simply place a check mark next to the desired report (Day-Ahead Constraints, Preliminary Real-Time Constraints, Final Real-Time Constraints) choose a date range and click the Display Results button. Click on the required report for the requested date.

Day-Ahead data sets are available for download at **http://www.iso-ne.com/histRpts/da-bc/da_binding_constraints_YYYYMMDD.csv.gz.**
Real-Time Preliminary data sets are available for download at **http://www.iso-ne.com/histRpts/rt-bc-prelim/rt_binding_constraints_prelim_YYYYMMDD.csv**.

Real-Time Final data sets are available for download at **http://www.iso-ne.com/histRpts/rt-bc-final/rt_binding_constraints_final_YYYYMMDD.csv**.

Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data.

To retrieve hourly data for a specific date range: **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?initial=false&startDate=MM/DD/YYYY&endDate=MM/DD/YYYY&selectedHourlyItems=allhourly**

Note: You will need to replace the MM/DD/YYYY in the given URL with the date stamp for the dates that you are seeking data.

Web Services

- /dayaheadconstraints
- /dayaheadconstraints/current
- /dayaheadconstraints/day/{day}
- /dayaheadconstraints/info
- /realtimeconstraints
- /realtimeconstraints/current
- /realtimeconstraints/current/hour
- /realtimeconstraints/day/{day}
- /realtimeconstraints/info

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LMP Price Indices (Weekly and Monthly)

Data Available

The wholesale electricity market price indices are published by ISO New England based on the arithmetic average of the New England Electricity Market hourly LMPs, Day-Ahead Market and final Real-Time Market LMPs as appropriate. The indices published are; Day-Ahead on-peak, Real-Time on peak, Day-Ahead off-peak, Real-Time off-peak, Day-Ahead all-hours, and Real-Time all-hours. The weekly indices are based on the week ending every Sunday [e.g., week is Monday to Sunday (note: weeks cross over months and years)]. The monthly indices are based on the relevant on-peak or off-peak days in the calendar month.

On-peak (Weekly and Monthly)

5 by 16 - On-peak include 16 peak hours of each peak day, hours 7AM to 11PM (HE 08 to HE 23) Eastern Time. Peak days are Monday to Friday, excluding NERC holidays.

Off-peak (Weekly and Monthly)

5 by 8 & 2 by 24 - Off-peak hours included for weekdays and weekends. Weekdays 11PM to 7AM (HE 24 to HE 07) and weekends all hours (HE 01 to HE 24). All hours of a NERC Holiday included as off-peak even if the holiday falls on a weekday.

All-hours or Around-the-clock (Weekly and Monthly)

7 by 24 - Around-the-clock all 24hrs of each day (HE 01 to HE 24) in the week. Week index is all days from Monday to Sunday (irrespective of month or year).

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Price Index Locations

The price indices are published for the following NEEM locations:

Weekly and Month Electricity Locational marginal prices Locations

Hub Name	***Hub Description***	***Hub ID***
Hub	.H.INTERNAL_HUB	4000
Zone Name	Zone Description	Zone ID
Maine	.Z.MAINE	4001
New Hampshire	.Z.NEWHAMPSHIRE	4002
Vermont	.Z.VERMONT	4003
Connecticut	.Z.CONNECTICUT	4004
Rhode Island	.Z.RHODEISLAND	4005
South East Massachusetts	.Z.SEMASS	4006
West Central Massachusetts	.Z.WCMASS	4007
North East Massachusetts & Boston	.Z.NEMASSBOST	4008

Sample Data in CSV Format

The sample data set is smaller than the full set that is available. It is intended to serve as an example.

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

This example is the Weekly index:

```
"C","Weekly Electricity Locational Marginal Price Indices"
"C","Report for 12/26/2005"
"C","Report generated Tue Jan  3 15:01:32 2006"
"H","Date","Location ID","Location Name","Day Ahead On-Peak","Day Ahead Off-
   Peak","Day Ahead All Hours","Real Time On-Peak","Real Time Off-Peak","Real
   Time All Hours"
"H","Week
   Beginning","ID","Description","$/MWh","$/MWh","$/MWh","$/MWh","$/MWh","$/M
   Wh"
"D","2005-01-03","4000",".H.INTERNAL_HUB",56.81,47.37,51.87,54.77,47.02,50.71
"D","2005-01-03","4001",".Z.MAINE",53.2,44.29,48.53,51.13,44.33,47.57
"D","2005-01-03","4002",".Z.NEWHAMPSHIRE",55.53,46.42,50.76,53.97,46.24,49.92
"D","2005-01-03","4003",".Z.VERMONT",56.73,47.3,51.79,54.64,47.54,50.92
"D","2005-01-03","4004",".Z.CONNECTICUT",56.32,47.05,51.46,54.79,46.82,50.61
```

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```
"D","2005-01-03","4005",".Z.RHODEISLAND",56.02,46.65,51.11,53.64,46.19,49.74
"D","2005-01-03","4006",".Z.SEMASS",55.97,46.6,51.06,53.59,45.97,49.6
"T","7 lines"
```

This example is the monthly index:

```
"C","Monthly Electricity Locational Marginal Price Indices"
"C","Report for 12/01/2005"
"C","Report generated Tue Jan  3 15:01:26 2006"
"H","Date","Location ID","Location Name","Day Ahead On-Peak","Day Ahead Off-
   Peak","Day Ahead All Hours","Real Time On-Peak","Real Time Off-Peak","Real
   Time All Hours"
"H","Month
   Begin","ID","Description","$/MWh","$/MWh","$/MWh","$/MWh","$/MWh","$/MWh"
"D","2005-01-01","4000",".H.INTERNAL_HUB",80.24,60.99,69.68,72.38,61.3,66.31
"D","2005-01-01","4001",".Z.MAINE",74.49,57.01,64.91,67.81,57.54,62.18
"D","2005-01-01","4002",".Z.NEWHAMPSHIRE",78.07,59.7,67.99,71.19,59.98,65.04
"D","2005-01-01","4003",".Z.VERMONT",79.91,60.98,69.53,72.37,61.35,66.33
"D","2005-01-01","4004",".Z.CONNECTICUT",79.48,60.61,69.13,71.84,60.86,65.82
"D","2005-01-01","4005",".Z.RHODEISLAND",78.62,59.87,68.34,70.84,60.18,64.99
"D","2005-01-01","4006",".Z.SEMASS",78.97,59.64,68.37,70.66,59.86,64.74
"T","7 lines"
```

Location and Data Extraction Method

The price indices are available at **http://www.iso-ne.com/markets/mkt_anlys_rpts/lmp_indices/index.html** and are published at the beginning of each week/month for the previous week/month once the final Real Time Market LMPs have been published.

Web Services

- /lmpIndex/monthly
- /lmpIndex/monthly/da/current/location/{locationId}
- /lmpIndex/monthly/da/year/{year}/location/{locationId}
- /lmpIndex/monthly/info
- /lmpIndex/monthly/rt/current/location/{locationId}
- /lmpIndex/monthly/rt/year/{year}/location/{locationId}
- /lmpIndex/weekly
- /lmpIndex/weekly/da/current/location/{locationId}
- /lmpIndex/weekly/da/year/{year}/location/{locationId}
- /lmpIndex/weekly/info
- /lmpIndex/weekly/rt/current/location/{locationId}
- /lmpIndex/weekly/rt/year/{year}/location/{locationId}

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Regulation Clearing Prices

Data Available

Three types of Regulation Clearing Prices reports are published, one every five minutes and the other two on an hourly basis (Preliminary and Final Hourly).

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

5-Minute Data:

```
C,Regulation Clearing Prices
C,Time period:      07/31/2006 - 07/31/2006
C,Report generated:2006-07-31 15:34:41 EDT
H,Local Time,Regulation Clearing Price
H,Time,$/MWh
D,2006-07-31 00:00:01,54.69
D,2006-07-31 00:05:03,54.69
D,2006-07-31 00:10:04,54.69
D,2006-07-31 00:20:01,54.69
T,4 Lines
```

Preliminary Hourly:

```
C,Hourly Regulation Clearing Prices
C,Time period:      07/28/2006-07/28/2006
C,Report generated:2006-07-28 10:05:42 EDT
H,,,Regulation Clearing Price
H,Date,Hour Ending,$/MWh
D,2006-07-28,01,54.69
D,2006-07-28,02,54.69
D,2006-07-28,03,54.69
D,2006-07-28,04,54.69
D,2006-07-28,05,54.69
T,5 lines
```


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Final Hourly:

```
C,Final Hourly Regulation Clearing Prices
C,Time period:      07/28/2006-07/28/2006
C,Report generated:2006-08-04 13:55:00 EDT
H,,,Regulation Clearing Price
H,Date,Hour Ending,$/MWh
D,07/28/2006,01,74.0
D,07/28/2006,02,74.0
D,07/28/2006,03,74.0
D,07/28/2006,04,74.0
D,07/28/2006,05,74.0
T,5 lines
```

Location and Data Extraction Method

The five-minute Regulation Clearing Prices data sets are available for interactive viewing from the historical five-minute data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Fivemin**. Simply place a check mark next to Five-Minute Regulation Clearing Prices, choose a date range and click the Display Results button. Click on the required report for the requested date range.

The historical hourly Regulation Clearing Prices data sets are available for interactive viewing from the historical archive of hourly data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly**. Simply place a check mark next to required reports (Preliminary Hourly Regulation Clearing Prices, Final Hourly Regulation Clearing Prices), choose a date range and click the Display Results button. Click on the required report for the requested date range.

Current Five-Minute Regulation Clearing Price CSV download:
http://www.iso-ne.com/markets/5min_data/res/fiveMinRES.do?submit=csv&report=rcp

Specific Five-Minute set:
Full page available at: http://www.iso-ne.com/markets/5min_data/res/fiveMinRES.do
Download of 5-min RCP data: **http://www.iso-ne.com/markets/5min_data/res/fiveMinRES.do?submit=csv&report=rcp&startDate=YYYYMMDD&endDate=YYYYMMDD**

The latest version of the preliminary hourly Regulation Clearing Prices is available for download at **http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=rcp&subcat=prelim&submit=csv.**

The latest version of the finalized hourly Regulation Clearing Prices is available for download at **http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=rcp&subcat=final&submit=csv.**

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Web Services

- /fiveminutercp
- /fiveminutercp/current
- /fiveminutercp/day/{day}
- /fiveminutercp/info
- /hourlyrcp/final
- /hourlyrcp/final/current
- /hourlyrcp/final/day/{day}
- /hourlyrcp/final/info
- /hourlyrcp/prelim
- /hourlyrcp/prelim/current
- /hourlyrcp/prelim/day/{day}
- /hourlyrcp/prelim/info

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Reserve Zone Prices and Designations

Data Available

The Reserve Zone Prices and Designations consist of two files, a five-minute file and an hourly file.

In these reports, only a Location ID number identifies the location. This is done to reduce the size of the file as much as possible.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

Reserve Zone Prices

```
Five-Minute:
C,Five-Minute Reserve Zone Prices & Designations
C,Time period:      07/27/2006-07/27/2006
C,Report generated:2006-07-27 17:00:58 EDT
H,Location ID,Local Time,TMSR,TMSNR,TMOR,TMSR DESG,TMSNR DESG,TMOR DESG
H,Label,Time,$MWh,$MWh,$MWh,MW,MW,MW
D,7000,2006-07-27 09:20:00,606,543.3,2079,829.5,543.3,921.7
D,7001,2006-07-27 09:20:00,0,55,496,15.0,55,91.7
D,7002,2006-07-27 09:20:00,0,155,1165,15.0,155,64.5
D,7003,2006-07-27 09:20:00,0,117,528,0.0,117.0,0
T,4 lines

Hourly:
C,Preliminary Hourly Reserve Zone Prices & Designations
C,Time period:      08/04/2006-08/04/2006
C,Report generated:2006-08-04 16:35:33 EDT
H,,,Location ID,TMSR Designated MW,TMSNR Designated MW,TMOR Designated MW,TMSR
   Clearing Price,TMNSR Clearing Price,TMOR Clearing Price
H,Date,Hour Ending,Label,MW,MW,MW,$,$,$
D,08/04/2006,01,7000,701.5,777.4,1064.5,0.0,0.0,0.0
D,08/04/2006,01,7001,20.2,187,83.5,0.0,0.0,0.0
D,08/04/2006,01,7002,65,165,152.4,0.0,0.0,0.0
D,08/04/2006,01,7003,184.4,176,230.4,0.0,0.0,0.0
T,4 lines
```


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Location and Data Extraction Method

The historical five-min Reserve Zone Prices and Designations data sets are available for interactive viewing from the historical five-minute data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Fivemin** . Simply place a check mark next to Five-Minute Reserve Zone Prices and Designations, choose a date range and click the Display Results button. Click on the required report for the requested date range.

The historical hourly Reserve Zone Prices and Designations data sets are available for interactive viewing from the historical archive of hourly data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly**. Simply place a check mark next to required reports (Reserve Zone Prices) choose a date range and click the Display Results button. Click on the required report for the requested date range.

Current Five-Minute Reserve Zone Prices and Designations CSV download
http://www.iso-ne.com/markets/5min_data/res/fiveMinRES.do?submit=csv&report=rzpd

Current Hourly Reserve Zone Prices and Designations CSV download
http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=rzpd&subcat=final&submit=csv

The latest version of the five-minute Reserve Zone Prices and Designations is available for download at http://www.iso-ne.com/markets/fiveMinRES.do?submit=csv&report-rzpd&startDate=YYYYMMDD&endDate=YYYYMMDD

The latest version of the preliminary hourly Reserve Zone Prices and Designations is available for download at **http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=rzpd&subcat=prelim&submit=csv**

The latest version of the finalized hourly Reserve Zone Prices and Designations is available for download at **http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=rzpd&subcat=final&submit=csv**

The final data sets are available for download at
http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=rzpd&subcat=final&submit=csv&startDate=YYYYMMDD&endDate=YYYYMMDD

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Web Services

- /fiveminutereserveprice
- /fiveminutereserveprice/current
- /fiveminutereserveprice/current/locationType/{locationType}
- /fiveminutereserveprice/current/reserveZone/{reserveZoneId}
- /fiveminutereserveprice/day/{day}/reserveZone/{reserveZoneId}
- /fiveminutereserveprice/info
- /hourlyfinalreserveprice
- /hourlyfinalreserveprice/current
- /hourlyfinalreserveprice/current/locationType/{locationType}
- /hourlyfinalreserveprice/current/reserveZone/{reserveZoneId}
- /hourlyfinalreserveprice/day/{day}/reserveZone/{reserveZoneId}
- /hourlyfinalreserveprice/info
- /hourlyprelimreserveprice
- /hourlyprelimreserveprice/current
- /hourlyprelimreserveprice/current/locationType/{locationType}
- /hourlyprelimreserveprice/current/reserveZone/{reserveZoneId}
- /hourlyprelimreserveprice/day/{day}/reserveZone/{reserveZoneId}
- /hourlyprelimreserveprice/info

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Forward Reserve Auction Results

Data Available

The Forward Reserve Auction Results are available to the general public including Participants, informing them of the Forward Reserve Auction results. The file contains offered and cleared MWs, the clearing prices for each of the reserve products and Reserve Zones, as well as the system TMNSR and TMOR proxy clearing prices. The system TMNSR and TMOR proxy clearing prices will be calculated beginning with the Summer 2011 Procurement Period.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Forward Reserve Auction Results Report
C,forward_reserve_auction_results.csv
C,Version: mm/dd/yyyy hh24:mi:ss
H,Forward Reserve Procurement Period,Procurement Period Begin
Month,Procurement Period End Month,Reserve Zone ID,Reserve Zone Name,Forward
TMNSR Total Supply Offered (MW),Forward TMNSR Supply Cleared (MW),Forward
TMNSR Clearing Price ($MW-Month),Forward TMOR Total Supply Offered
(MW),Forward TMOR Supply Cleared (MW),Forward TMOR Clearing Price ($MW-Month)
,System TMNSR Proxy Price ($MW-Month),System TMOR Proxy Price ($MW-Month)
D,Summer 06/2011-
09/2011,06/2011,09/2011,7000,ROS,1338.800,704.000,5500.00,213.000,16.000,5500.
00,5400.00,5400.00
D,Summer 06/2011-
09/2011,06/2011,09/2011,7001,SWCT,0.000,0.000,6023.74,421.701,236.200,6023.74,
5400.00,5400.00
D,Summer 06/2011-
09/2011,06/2011,09/2011,7002,CT,419.800,354.800,6023.74,591.100,334.000,6023.7
4,5400.00,5400.00
D,Summer 06/2011-
09/2011,06/2011,09/2011,7003,NEMABSTN,0.000,0.000,0.00,0.000,0.000,0.00,5400.0
0,5400.00
T,4 lines
```

Location and Data Extraction Method

The Forward Reserve Auction Results are found at
http://www.iso-ne.com/markets/othrmkts_data/res_mkt/summ/index.html

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Forward Reserve Market Threshold Price

Data Available

The Forward Reserve Market Threshold Price is available to the general public including Participants, informing them of the Forward Reserve Threshold Price. The file contains begin and end months for the Forward Reserve Procurement Period, the Obligation Month, Heat Rate, Forward Reserve Fuel Index, and Threshold Price.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Forward Reserve Market Threshold Price
C,forward_reserve_market_threshold_price.csv
C,Version: mm/dd/yyyy hh24:mi:ss
H,Forward Reserve Procurement Period,Procurement Period Begin
   Month,Procurement Period End Month,Obligation Month (Month/Year),Forward
   Reserve Heat Rate (MMBTU/MWh),Monthly Forward Reserve Fuel Index
   ($/MMBTU),Monthly Forward Reserve Threshold Price ($/MWh)
D,Winter 10/2006-05/2007,10/2006,05/2007,10/2006,0,0,0
D,Winter 10/2006-05/2007,10/2006,05/2007,11/2006,0,0,0
D,Winter 10/2006-05/2007,10/2006,05/2007,12/2006,0,0,0
D,Winter 10/2006-05/2007,10/2006,05/2007,01/2007,0,0,0
D,Winter 10/2006-05/2007,10/2006,05/2007,02/2007,0,0,0
D,Winter 10/2006-05/2007,10/2006,05/2007,03/2007,0,0,0
D,Winter 10/2006-05/2007,10/2006,05/2007,04/2007,0,0,0
D,Winter 10/2006-05/2007,10/2006,05/2007,05/2007,0,0,0
D,Summer 06/2007-09/2007,06/2007,09/2007,06/2007
D,Summer 06/2007-09/2007,06/2007,09/2007,07/2007
D,Summer 06/2007-09/2007,06/2007,09/2007,08/2007
D,Summer 06/2007-09/2007,06/2007,09/2007,09/2007
T,12 lines
```

Location and Data Extraction Method

The Forward Reserve Market Threshold Price report is found at
http://www.iso-ne.com/markets/othrmkts_data/res_mkt/threshold/index.html

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Reserve Requirements

Data Available

The Reserve Requirements consist of two files, a five-minute file and an hourly file.
In these reports, only a Location ID number identifies the location. This is done to reduce the size of the file as much as possible.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

Five-Minute Reserve Zone Requirements:

```
C,Five-Minute Reserve Requirements
C,Time period:      07/27/2006 - 07/27/2006
C,Report generated:2006-07-27 17:03:20 EDT
H,Location ID,Local Time,10MINSPIN,TOT10MIN,TOT30MIN
H,Label,Time,MW,MW,MW
D,7000,2006-07-27 09:20:00,606,1500,2079
D,7001,2006-07-27 09:20:00,0,0,496
D,7002,2006-07-27 09:20:00,0,0,1165
D,7003,2006-07-27 09:20:00,0,0,528
T,4 lines
```

Hourly Reserve Zone Requirements:

```
C,Hourly Reserve Requirements
C,Time period:      07/28/2006-07/28/2006
C,Report generated:2006-07-28 10:07:25 EDT
H,,,Location ID,10MINSPIN,TOT10MIN,TOT30MIN
H,Date,Hour Ending,Label,MW,MW,MW
D,2006-07-28,01,7000,606,1500,2079
D,2006-07-28,01,7001,0,0,497
D,2006-07-28,01,7002,0,0,1165
D,2006-07-28,01,7003,0,0,525
T,4 lines
```


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Location and Data Extraction Method

The five-min Reserve Requirements data sets are available for interactive viewing from the historical five-minute data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Fivemin**. Simply place a check mark next to Five-Minute Reserve Requirements, choose a date range and click the Display Results button. Click on the required report for the requested date range.

The hourly Reserve Requirements data sets are available for interactive viewing from the historical archive of hourly data at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly.** Simply place a check mark next to required report (Reserve Requirements), choose a date range and click the Display Results button. Click on the required report for the requested date range.

Current Five-Minute Reserve Requirements
http://www.iso-ne.com/markets/5min_data/res/fiveMinRES.do?submit=csv&report=reservereq

The latest version of the Five-Minute Reserve Requirements available for download at **http://www.iso-ne.com/markets/hrly_data/res/fiveMinRES.do?report=reservereq&subcat=final&submit=csv&startDate=YYYYMMDD&endDate=YYYYMMDD**

Current Hourly Reserve Requirements
http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=reservereq&subcat=final&submit=csv

The latest version of the finalized hourly Reserve Requirements available for download at
http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=reservereq&subcat=final&submit=csv

The final data sets are available for download at
http://www.iso-ne.com/markets/hrly_data/res/hourlyRES.do?report=reservereq&subcat=final&submit=csv&startDate=YYYYMMDD&endDate=YYYYMMDD

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Short Term Outage Report

Data Available

The short term outages data are available to the general public, including Participants, informing them of non-proprietary details of active or planned outages within a three-week period (forward-looking). The CSV file contains the following:

- Application number
- Company Name 1
- Company Name 2 (Company Name 2 will be used when equipment is managed by two companies)
- Station Name
- Type of equipment
- Description of equipment
- Voltage
- Planned Start date and time
- Planned End date and time
- Actual Start date and time
- Actual End date and time
- Status of Request
- Request Type
- Flags: Economic, MTO, Overrun

Redesign and enhancements have been made to the report that will provide the user ease of use and up to date data. The most evident enhancements you will notice are:

- Automated updates on 15 minute intervals
- Interactive Web Interface
- Downloadable CSV files of Outage Reports
- 6 months worth of archived data
- Actual End time and dates when available
- Consistent nomenclature for equipment
- Consistent data and time format
- Outages that have been profiled will be listed each day.
- Outages comprised of an equipment group will display all the associated elements within that group.

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Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Short Term Outages,,,,,,,,,,,,,,,,
C,WW_STOUTAGE-CURRENT_ISO_2008112000-2008121100_20081120175524.csv,,,,,,,,,,,,,,,,
C,Time Period: 20081120 - 20081211,,,,,,,,,,,,,,,,
C,Date: 11/20/2008 and Version: 11/20/2008 17:55:24 GMT,,,,,,,,,,,,,,,,
H,LOCAL TIME,LOCAL HOUR END,APPLICATION NUMBER,COMPANY
1,STATION,COMPANY 2,EQUIPMENT TYPE,EQUIPMENT DESCRIPTION,VOLTAGE,PLANNED
START DATE,PLANNED END DATE,ACTUAL START DATE,ACTUAL END
DATE,STATUS,REQUEST TYPE,Economic Flag,MTO Flag,Overrun Flag
H,Date/Time,String,Number,String,String,String,String,String,Volts,Date/Time,Date/Time,Date/Time,Da
te/Time,String,String,String,String,String
D,11/20/2008 07:45,13,8000029,REMVEC,PLYMOUTH,,Line,A179-2: LYNN,115,11/07/2008
08:00,12/31/2008 16:00,11/07/2008 19:11,,Implemented,Emergency,N,N,N
D,11/20/2008 07:45,13,8000029,REMVEC,PLYMOUTH,,Line,A179-1: REVERE,115,11/07/2008
08:00,12/31/2008 16:00,11/07/2008 19:11,,Implemented,Emergency,N,N,N
D,11/20/2008 07:45,13,8000046,CONVEX,PLYMOUTH,,Breaker,1300-5: 1300-2,115,11/08/2008
08:00,11/21/2008 16:00,11/18/2008 10:21,,Implemented,Forced,N,N,N
D,11/20/2008 07:45,13,8000046,CONVEX,PLYMOUTH,,Breaker,1X1-2: 1X,115,11/08/2008
08:00,11/21/2008 16:00,11/18/2008 10:21,,Implemented,Forced,N,N,N
D,11/20/2008 07:45,13,8000035,REMVEC,PLYMOUTH,,Line,E205E: PRAT_J,230,11/08/2008
08:00,12/18/2008 16:00,11/18/2008 10:21,,Implemented,Forced,N,N,N
D,11/20/2008 07:45,13,8000028,REMVEC,PLYMOUTH,,Breaker,191-1: M191-2,115,11/08/2008
    08:00,11/30/2008 16:00,11/18/2008 10:21,,Implemented,Forced,N,N,NT,6 lines
```


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Location and Data Extraction Method

The short term outage data are available for viewing at **http://www.iso-ne.com/trans/ops/outages**.

The historical data are available for six months at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Outage.** Simply place a check mark next to the desired report, choose a date range and click the Display Results button. Click on the desired report for the requested date range.

The latest version of the Short Term Outage data is available for download at **http://www.iso-ne.com/trans/ops/outages/generateCurrentCSV.action**

Historical Short Term Outage data is available from at **http://www.iso-ne.com/trans/ops/outages/generateHistoricalCSV.action?submit=csv&startDate=YYYYMMDD&endDate=YYYYMMDD**

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Long Term Outage Report

Data Available

The long term outages data are available to the general public, including Participants, informing them of non-proprietary details of active or planned outages planned to take place between 22 days and 12 months from current day (forward-looking). The file contains the following:

- Application number
- Company Name 1
- Company Name 2 (Company Name 2 will be used when equipment is managed by two companies)
- Station Name
- Type of equipment
- Description of equipment
- Voltage
- Planned Start date and time
- Planned End date and time
- Actual Start date and time
- Actual End date and time
- Status of Request
- Request Type
- Flags: Economic, MTO, Overrun

Redesign and enhancements have been made to the report that will provide the user ease of use and up to date data. The most evident enhancements you will notice are:

- Automated daily updates
- Downloadable CSV files of Outage Reports
- Consistent nomenclature for equipment
- Consistent data and time format
- Outages that have been profiled will be listed each day.
- Outages comprised of an equipment group will display all the associated elements within that group.

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Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Long Term Outages,,,,,,,,,,,,,,,,
C,WW_LTOUTAGE-CURRENT_ISO_2008121200-2009112000_20081120180403.csv,,,,,,,,,,,,,,,,
C,Time Period: 20081212 - 20091120,,,,,,,,,,,,,,,,
C,Date: 12/12/2008 and Version: 11/20/2008 18:04:03 GMT,,,,,,,,,,,,,,,,
H,LOCAL TIME,LOCAL HOUR END,APPLICATION NUMBER,COMPANY 1,COMPANY
    2,STATION,EQUIPMENT TYPE,EQUIPMENT DESCRIPTION,VOLTAGE,PLANNED START
    DATE,PLANNED END DATE,ACTUAL START DATE,ACTUAL END
    DATE,STATUS,REQUEST TYPE,Economic Flag,MTO Flag,Overrun Flag
H,Date/Time,String,Number,String,String,String,String,String,Volts,Date/Time,Date/Time,Date/Time,Da
    te/Time,String,String,String,String,String
D,11/20/2008 08:00,14,8000009,REMVEC,,PLYMOUTH,Line,Q143S-2: WOONSCKT,115,12/14/2008
    08:00,12/14/2008 16:00,,,Interim Approved,Long Term,N,Y,N
D,11/20/2008 08:00,14,8000009,REMVEC,,PLYMOUTH,Line,R144-4: WOONSCKT,115,12/23/2008
    08:00,12/23/2008 16:00,,,Interim Approved,Long Term,N,Y,N
D,11/20/2008 08:00,14,8000009,REMVEC,,PLYMOUTH,Line,Q143S-2: WOONSCKT,115,12/20/2008
    08:00,12/20/2008 16:00,,,Interim Approved,Long Term,N,Y,N
D,11/20/2008 08:00,14,8000009,REMVEC,,PLYMOUTH,Line,R144-4: WOONSCKT,115,12/17/2008
    08:00,12/17/2008 16:00,,,Interim Approved,Long Term,N,Y,N
D,11/20/2008 08:00,14,8000009,REMVEC,,PLYMOUTH,Line,Q143S-2: WOONSCKT,115,12/27/2008
    08:00,12/27/2008 16:00,,,Interim Approved,Long Term,N,Y,N
D,11/20/2008 08:00,14,8000009,REMVEC,,PLYMOUTH,Line,R144-4: WOONSCKT,115,12/31/2008
    08:00,12/31/2008 16:00,,,Interim Approved,Long Term,N,Y,N
T, 6 lines
```


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Location and Data Extraction Method

The long term outage data are available for viewing at URL: **http://www.iso-ne.com/trans/ops/outages/long_term/longTerm.action**.

The historical data are available for six months at **http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Outage.** Simply place a check mark next to the desired report, choose a date range and click the Display Results button. Click on the desired report for the requested date range.

The latest version of the Short Term Outage data is available for download at **http://www.iso-ne.com/trans/ops/outages/generateCurrentCSV.action**

Historical Short Term Outage data is available from at **http://www.iso-ne.com/trans/ops/outages/generateHistoricalCSV.action?submit=csv&startDate=YYYYMMDD&endDate=YYYYMMDD**

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Wholesale Load Cost Data

Data Available

New wholesale load cost data are ordinarily available by the seventh business day following the end of the month, and will reflect resettlement activity. The impact of resettlements on the data series is expected to be minimal.

The user may select a location from among New England and the eight load zones and then select a date range of up to one year. The user may then download a report that contains hourly data, or monthly or yearly averages of the components comprising wholesale load cost. Note that only the 'Total Cost' and 'Real-Time Load Obligation' concepts are available at the New England level. Yearly averages will only reflect the latest data available in the dataset.

A full description of the load cost concepts reported, and a statement concerning the latest month contained in the dataset may be found in the **Monthly Load Cost Report**.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,New England Wholesale Load Cost Data,,,,,,,,,,,,,,,,,,
C,WW_LOADCOST_iso_4004_2008060100-
   2008080100_20081209194646.csv,,,,,,,,,,,,,,,,,,
C,Time period:      06/01/2008-08/01/2008,Type: Hourly,Load Zone: 4004 -
   .Z.CONNECTICUT,,,,,,,,,,,,,,,,
C,Location/Node:    .Z.CONNECTICUT(4004),,,,,,,,,,,,,,,,,,
C,Date:12/09/2008 and Version:2008-12-09 19:46:46 EST,,,,,,,,,,,,,,,,,,
H,Local Date,Local Hour,OnOff,Location_ID,RTLMP,Capacity,First
   Contingency,Second Contingency,Regulation,Forward Reserves,Real-Time
   Reserves,Inadvertent,Marginal Loss Rev Fund,Auction Rev Rights,ISO Sched
   2,ISO Sched 3,NEPOOL Exp,Total Cost,RTLO
H,Date,Time,Label,Number,$/MW,$/MW,$/MW,$/MW,$/MW,$/MW,$/MW,$/MW,$/MW,$/M
   W,$/MW,$/MW,$/MW,MWh
D,06/02/2008,8,ON,4004,83,6.94,0.42,0.27,1.07,3.69,0,0.04,-0.83,-
   0.66,0.16,0.21,0.23,-94.54,3593.717
D,06/02/2008,9,ON,4004,98.59,6.94,0.42,0.27,0.31,3.57,0,0.16,-0.67,-
   0.66,0.16,0.21,0.23,-109.53,3814.319
D,06/02/2008,10,ON,4004,99.9,6.94,0.42,0.27,0.18,3.41,0,0.33,-0.63,-
   0.66,0.16,0.21,0.23,-110.76,3986.126
D,06/02/2008,11,ON,4004,95.1,6.94,0.42,0.27,0.08,3.31,0,0.2,-0.6,-
   0.66,0.16,0.21,0.23,-105.66,4116.745
D,06/02/2008,12,ON,4004,102.2,6.94,0.42,0.27,0.29,3.24,0.04,0.26,-0.57,-
   0.66,0.16,0.21,0.23,-113.03,4198.813
D,06/02/2008,13,ON,4004,103.92,6.94,0.42,0.27,0.14,3.25,0,0.31,-0.57,-
   0.66,0.16,0.21,0.23,-114.62,4225.819
D,06/02/2008,14,ON,4004,111,6.94,0.42,0.27,0.39,3.23,0,0.25,-0.56,-
   0.66,0.16,0.21,0.23,-121.88,4286.475
D,06/02/2008,15,ON,4004,143.02,6.94,0.42,0.27,0.57,3.23,0,0.36,-0.6,-
   0.66,0.16,0.21,0.23,-154.15,4305.428
D,06/02/2008,16,ON,4004,127.88,6.94,0.42,0.27,0.23,3.23,0,0.2,-0.46,-
```


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```
   0.66,0.16,0.21,0.23,-138.65,4328.728
D,06/02/2008,17,ON,4004,136.01,6.94,0.42,0.27,0.22,3.23,0,0.4,-0.44,-
   0.66,0.16,0.21,0.23,-146.99,4331.285
D,06/02/2008,18,ON,4004,119.82,6.94,0.42,0.27,0.23,3.26,0,0.21,-0.46,-
   0.66,0.16,0.21,0.23,-130.63,4271.458
D,06/02/2008,19,ON,4004,97.51,6.94,0.42,0.27,0.14,3.33,0,0.32,-0.42,-
   0.66,0.16,0.21,0.23,-108.45,4164.406
D,06/02/2008,20,ON,4004,92.74,6.94,0.42,0.27,0.14,3.39,0,0.21,-0.53,-
   0.66,0.16,0.21,0.23,-103.52,4061.727T,4 lines
T, 13 lines
```

Location and Data Extraction Method

The selectable wholesale load cost data is available for interactive viewing at **http://www.iso-ne.com/markets/mkt_anlys_rpts/whlse_load/select/WhlseLoad.do**. Simply follow the five easy steps for choosing criteria before downloading the data.

The final data sets are available for download at
http://www.iso-ne.com/markets/mkt_anlys_rpts/whlse/selectWhlseLoad.do?loadZone=XXXX&periodicity=Aaaa&detailLevel=AAA&loadCostConcept=AA&startYear=YYYY&startMonth=MM&endYear=YYYY&endMonth=MM&type=csv

The variables used in the URL are:
loadZone = 4001, 4002, 4003, 4004, 4005, 4006, 4007, 4008
periodicity = Monthly, Hourly, Yearly
detailLevel = ON, OFF, ALL
loadCostConcept = ALL, RTLO, TC
startyear = 2005, 2006, etc (data is available from 01/2005 thru the last current settlement monthly data)
startmonth = 01, 02, 03, etc
endyear = 2005, 2006 through current year
endmonth = 01, 02, 03, etc
type = CSV

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Competitive Offer Levels

Data Available

Effective July 1, 2009 Ex-Ante and Final Competitive Offer Levels are available.

Final Offer Levels: Data is available in download format only. Final offer levels are settled two business days after the ex-ante offer levels. Once settled, ex-ante and final offer levels will be available in the CSV file.

Using the interface, the user may select one, many or all interfaces, and then select a date range of up to one year. The user may then download a CSV report that contains ex-ante and final offer levels for the interfaces and date range selected.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Final Competitive Offer Levels,,,,,,
C,WW_FINAL_COMP_OFFER_2009050112-2009052212_20090528120731.csv,,,,,,
C,Time Period: 05/01/2009-05/22/2009,,,,,,
C,Report Generated: 2009-05-28 12:07:32 EDT,,,,,,
H,Local Date,Local Hour End,Location ID,Location Name,Ex-Ante Prices,Ex-Post
   Prices,Final CO
H,Date,Hour End,String,String,$/MWh,$/MWh,PUBDB1T
D,05/01/2009,1,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
D,05/01/2009,2,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
D,05/01/2009,3,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
D,05/01/2009,4,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
D,05/01/2009,5,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
D,05/01/2009,6,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
D,05/01/2009,7,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
D,05/01/2009,8,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
D,05/01/2009,9,4010,.I.SALBRYNB345 1,48.17,67.34,67.34
T, 9 lines
```


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Location and Data Extraction Method

The selectable final offer levels data are available for download at: **http://www.iso-ne.com/markets/othrmkts_data/inst_cap/import_offer/final/final.action**

The final data sets are available for download at **http://www.iso-ne.com/markets/othrmkts_data/inst_cap/import_offer/final/final.action ?type=submit&**interfaceCheckBox=XXXX**&startDate=MM/DD/YYYY&endDate=MM/DD/YYYY**

The variables used in the URL are:
interfaceCheckBox = 4010, 4011, 4012, 4013, 4017

startDate - **MM/DD/YYYY**
endDate - **MM/DD/YYYY**
type = submit

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Transmission Related Commitment and NCPC Reporting

Data Available

Archival data of Day-Ahead and Real-Time NCPC MW, credit by type and reliability region, and dollars per MWh rate. Disclaimer: This data is not billing quality. Please refer to current MIS reports for billing quality data.

The user may select a date range (up to two years), report type, report content, and market, as well as an area within the New England region. The user may then download a report that contains hourly or daily data, for transmission related by reliability region or economic for system, for the day-ahead or real-time markets.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

Sample CSV for Transmission & Economic for System

```
C,Real-Time Market,,,,,,,,,
C,Transmission Related Commitment and NCPC Report by Hour,,,,,,,,,
C,Transmission & Economic for System,,,,,,,,,
C,Area: SYSTEM,,,,,,,,,
C,06/24/2008 - 06/25/2009,,,,,,,,,
H,Date,Hour,Transmission RMR & VAR Up NCPC MW,Transmission RMR & VAR Up NCPC
   ($),Average Transmission NCPC ($/MW),Economic MW,Economic NCPC ($),Average
   Economic NCPC ($/MW),Total Transmission & Economic NCPC MW,Total
   Transmission & Economic NCPC ($),Average Transmission & Economic NCPC
   ($/MW)
D,06/24/2008,1,266.63,35397.33,132.76,254.946,4530.76,17.77,521.576,39928.09,7
   6.55
D,06/24/2008,2,198.59,22010.7,110.83,229.295,3182.94,13.88,427.885,25193.64,58
   .88
D,06/24/2008,3,198.59,21020.86,105.85,189.08,984.71,5.21,387.67,22005.57,56.76
D,06/24/2008,4,198.59,20668.89,104.08,194.5,968.22,4.98,393.09,21637.11,55.04
D,06/24/2008,5,198.59,21321,107.36,171.458,998.77,5.83,370.048,22319.77,60.32
D,06/24/2008,6,198.59,22048.55,111.03,180.958,1032.85,5.71,379.548,23081.4,60.
   81
D,06/24/2008,7,272.62,38665.82,141.83,316.76,4079.32,12.88,589.38,42745.14,72.
   53
D,06/24/2008,8,198.52,25330.52,127.6,261.639,4172.07,15.95,460.159,29502.59,64
   .11
D,06/24/2008,9,256.61,42705.77,166.42,303.771,2786.94,9.17,560.381,45492.71,81
   .18
D,06/24/2008,10,256.59,45059.35,175.61,373.359,1421.67,3.81,629.949,46481.02,7
   3.79
D,06/24/2008,11,256.58,46847.63,182.58,235.658,91.62,0.39,492.238,46939.25,95.
   36
D,06/24/2008,12,256.56,47892.71,186.67,78.45,861.38,10.98,335.01,48754.09,145.
   53
```

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```
D,06/24/2008,13,255.57,48071.29,188.09,701.113,2381.29,3.4,956.683,50452.58,52
   .74
D,06/24/2008,14,257.57,48669.58,188.96,440.517,2315.75,5.26,698.087,50985.33,7
   3.04
D,06/24/2008,15,255.58,47613.83,186.3,38.375,856.37,22.32,293.955,48470.2,164.
   89
D,06/24/2008,16,256.57,47294.64,184.33,0,0,,256.57,47294.64,184.33
D,06/24/2008,17,257.59,47188.37,183.19,0,0,,257.59,47188.37,183.19
D,06/24/2008,18,256.61,46246.73,180.22,0,0,,256.61,46246.73,180.22
D,06/24/2008,19,256.62,44562.97,173.65,0,0,,256.62,44562.97,173.65
D,06/24/2008,20,256.63,42675.92,166.29,0,0,,256.63,42675.92,166.29
T, 20 lines
```

Sample CSV for Transmission Related by Reliability Region

```
,Real-Time Market,,,,,,,,,,,,
C,Transmission Related Commitment and NCPC Report by Hour,,,,,,,,,,,,
C,Transmission Related by Reliability Region,,,,,,,,,,,,
C,Area: SYSTEM,,,,,,,,,,,,
C,06/24/2008 - 06/25/2009,,,,,,,,,,,,
H,Date,Hour,RMR,VAR Up,RMR/VAR Up,RMR MW,RMR NCPC ($),Average RMR NCPC
   ($/MW),VAR Up MW,VAR Up NCPC ($),Average VAR Up NCPC ($/MW),Total NCPC
   MW,Total NCPC ($),Average Total NCPC ($/MW)
D,06/24/2008,1,Y,N,N,266.63,35397.33,132.76,0,0,,266.63,35397.33,132.76
D,06/24/2008,2,Y,N,N,198.59,22010.7,110.83,0,0,,198.59,22010.7,110.83
D,06/24/2008,3,Y,N,N,198.59,21020.86,105.85,0,0,,198.59,21020.86,105.85
D,06/24/2008,4,Y,N,N,198.59,20668.89,104.08,0,0,,198.59,20668.89,104.08
D,06/24/2008,5,Y,N,N,198.59,21321,107.36,0,0,,198.59,21321,107.36
D,06/24/2008,6,Y,N,N,198.59,22048.55,111.03,0,0,,198.59,22048.55,111.03
D,06/24/2008,7,Y,N,N,272.62,38665.82,141.83,0,0,,272.62,38665.82,141.83
D,06/24/2008,8,Y,N,N,198.52,25330.52,127.6,0,0,,198.52,25330.52,127.6
D,06/24/2008,9,Y,N,N,256.61,42705.77,166.42,0,0,,256.61,42705.77,166.42
D,06/24/2008,10,Y,N,N,256.59,45059.35,175.61,0,0,,256.59,45059.35,175.61
D,06/24/2008,11,Y,N,N,256.58,46847.63,182.58,0,0,,256.58,46847.63,182.58
D,06/24/2008,12,Y,N,N,256.56,47892.71,186.67,0,0,,256.56,47892.71,186.67
D,06/24/2008,13,Y,N,N,255.57,48071.29,188.09,0,0,,255.57,48071.29,188.09
D,06/24/2008,14,Y,N,N,257.57,48669.58,188.96,0,0,,257.57,48669.58,188.96
D,06/24/2008,15,Y,N,N,255.58,47613.83,186.3,0,0,,255.58,47613.83,186.3
T, 15 lines
```


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Location and Data Extraction Method

The selectable transmission related commitment and NCPC reporting is available for interactive viewing and download at **http://www.iso-ne.com/othrmkts/opsres/tcorc_rpt/ncpc.do**.

The transmission related commitment and NCPC data sets are available for download at http://www.iso-ne.com/othrmkts/opsres/tcorc_rpt/ncpc.do?startDate=MM/DD/YYYY&endDate=MM/DD/YYYY&report=XXXXX&content=XXXXXXXXXX=XX&area=XXX&type=csv

The variables used in the URL are:
report =hourly, daily
content= trans&market, , all
market= RT, DA
area = system, 9001, 9002, 9003, 9004, 9005, 9006., 9007, 9008
startDate - **MM/DD/YYYY**
endDate - **MM/DD/YYYY**
type = csv

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Seven Day Forecast (as of June 1, 2010)

Data Available

The Seven Day Forecast of the ISO-NE Capacity Margin is published each day by 11:00 AM. This format is effective for the implementation of the Forward Capacity Market on June 1, 2010.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

Sample CSV for Seven Day Forecast

```
"C","Seven Day Forecast"
"C","Report for 3/11/2010"
"C","Report Generated 03/23/2010 20:27:19 GMT"
"H","","Day 2","Day 3","Day 4","Day 5","Day 6","Day 7"
"D","Day","Thu","Fri","Sat","Sun","Mon","Tue"
"D","Date","03/11/10","03/12/10","03/13/10","03/14/10","03/15/10","03/16/10"
"G","Weather"
"D","High Temperature - Boston",47,44,44,45,43,46
"D","Dew Point - Boston",31,34,39,41,34,30
"D","High Temperature - Hartford",56,46,46,49,45,49
"D","Dew Point - Hartford",32,34,39,41,31,31
"G","Generating Capacity Position"
"D","Total Capacity Supply Obligation
(CSO)",31203,31203,31203,31203,31203,31203
"D","Anticipated Cold Weather Outages",-125,-125,-125,-125,-125,-125
"D","Other Generation Outages",-752,-752,-872,-872,-1165,-752
"D","Anticipated De-List MW Offered",2505,2505,2505,2505,2505,2505
"D","Total Generation Available",32831,32831,32711,32711,32418,32831
"D","Import at Time of Peak",125,125,125,125,125,125
"D","Total Available Generation and
Imports",32956,32956,32836,32836,32543,32956
"D","Projected Peak Load",14660,14450,14270,13850,13240,-999
"D","Required Reserve",2084,2084,2084,2084,2084,2084
"D","Total Load plus Required Reserve",16744,16534,16354,15934,15324,1085
"D","Projected Surplus/(Deficiency)",16212,16422,16482,16902,17219,31871
"D","Available Real-Time Demand Response",107,641,641,641,641,641
"D","Available Real-Time Emergency Generation",83,666,666,666,666,666
"G","Load Relief Actions Anticipated"
"D","Power Watch","NO","NO","NO","NO","NO","NO"
"D","Power Warning","NO","NO","NO","NO","NO","NO"
"D","Cold Weather Watch","NO","NO","NO","NO","NO","NO"
"D","Cold Weather Warning","NO","NO","NO","NO","NO","NO"
"D","Cold Weather Event","NO","NO","NO","NO","NO","NO"
"D","Energy Emergency","NO","NO","NO","NO","NO","NO"
"T","26 lines"
```


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Sample HTML file for Seven Day Forecast

	Day 2 Thu 03/11/10	Day 3 Fri 03/12/10	Day 4 Sat 03/13/10	Day 5 Sun 03/14/10	Day 6 Mon 03/15/10	Day 7 Tue 03/16/10
Weather						
High Temperature - Boston	47	44	44	45	43	46
Dew Point - Boston	31	34	39	41	34	30
High Temperature - Hartford	56	46	46	49	45	49
Dew Point - Hartford	32	34	39	41	31	31
Generating Capacity Position						
Total Capacity Supply Obligation (CSO)	31,203	31,203	31,203	31,203	31,203	31,203
Anticipated Cold Weather Outages	-125	-125	-125	-125	-125	-125
Other Generation Outages	-752	-752	-872	-872	-1,165	-752
Anticipated De-List MW Offered	2,505	2,505	2,505	2,505	2,505	2,505
Total Generation Available	32,831	32,831	32,711	32,711	32,418	32,831
Import at Time of Peak	125	125	125	125	125	125
Total Available Generation and Imports	32,956	32,956	32,836	32,836	32,543	32,956
Projected Peak Load	14,660	14,450	14,270	13,850	13,240	-999
Required Reserve	2,084	2,084	2,084	2,084	2,084	2,084
Total Load plus Required Reserve	16,744	16,534	16,354	15,934	15,324	1,085
Projected Surplus/(Deficiency)	16,212	16,422	16,482	16,902	17,219	31,871
Available Real-Time Demand Response	107	641	641	641	641	641
Available Real-Time Emergency Generation	83	666	666	666	666	666
Load Relief Actions Anticipated						
Power Watch	NO	NO	NO	NO	NO	NO
Power Warning	NO	NO	NO	NO	NO	NO
Cold Weather Watch	NO	NO	NO	NO	NO	NO
Cold Weather Warning	NO	NO	NO	NO	NO	NO
Cold Weather Event	NO	NO	NO	NO	NO	NO
Energy Emergency	NO	NO	NO	NO	NO	NO

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Location and Data Extraction Method

The Seven Day Forecast interactive viewing and download at -
http://www/sys_ops/op_frcstng/7day_frcst/index.html.

Latest Seven Day Forecast CSV Direct Download URL -
http://www/sys_ops/op_frcstng/csvdocs/Seven_Day_Forecast.csv

View the Seven Day Forecast with explanations -
http://www/sys_ops/op_frcstng/7day_frcst/index.html?view=explain

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Morning Report (as of June 1, 2010)

Data Available

The Morning Report is published daily each day no later than 09:00 AM for the current day. This format is effective for the implementation of the Forward Capacity Market on June 1, 2010.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

Sample CSV for Morning Report

```
"C","Morning Report"
"C","Report for 2/15/2009"
"C","Report Generated 03/03/2010 18:28:53 GMT"
"H","DESCRIPTION"
"H",""
"G","Report Type"
"D","Morning Report"
"H","DATE","TIME"
"H","","""
"G","1. Report Date"
"D","Sunday, Feb 15 2009","13:28:53 EST"
"H","DESCRIPTION","VALUE"
"H","","(MW)"
"G","2. Peak Load"
"D","Saturday, Feb 14 2009 hour ending 19",18466
"G","3. Operable Capacity Analysis"
"D","A. Capacity Supply Obligation (CSO)",34666
"D","B. Capacity Additions EcoMax Bid > CSO",76
"D","C. Pre-OP4 Dispatchable Loads",0
"D","D. Generation Outages and Reductions",3132
"D","E. Uncommitted Available Generation (non fast start)",9898
"G","F. Capacity Deliveries: Net Purchases = (-) Net Sales = (+)"
"D","NYISO AC Ties",445
"D","NYISO NNC",112
"D","NYISO CSC",334
"D","NB",445
"D","Phase 2",-1415
"D","Highgate",-119
"D","Net Deliveries",-198
"D","G. Total Available Capacity (A+B+C-D-E-F)",21910
"D","H. Peak Load Forecast For Hour 19",19600
"D","I. Total Operating Reserve Requirement",2222
"D","J. Capacity Required",21822
"D","K. Surplus = (+) Deficiency = (-) (G - J)",88
"D","L. Replacement Reserve Requirement",0
"D","M. Excess Commitment Surplus = (+) Deficiency = (-) (K - L)",88
"G","4. Largest First Contingency"
"D","MYS8 & 9",1616
"G","5. Annual Maintenance Schedule (A.M.S)"
"D","Peak Load Exposure",21212
```


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"G","6. Reserve Summary"
"D","Ten Minute Reserve Requirement:",1616
"D","Ten Minute Reserve Estimate:",1616
"D","Thirty Minute Reserve Requirement:",600
"D","Thirty Minute Reserve Estimate:",688
"D","Expected ICU Operation","0"
"D","Expected Actions of OP 4:","0"
"D","Additional Capacity Available from OP 4 Actions:","0"
"H","DESCRIPTION","TRANSFER LIMIT IN","TRANSFER LIMIT OUT","SCHEDULED CONTRACT"
"H","(MW)","(MW)","(MW)"
"G","7. Interchange Summary"
"D","NYISO AC Ties",-1300,1100,444
"D","NYISO NNC",-90,50,111
"D","NYISO CSC",-336,336,333
"D","NB",-900,500,444
"D","Phase 2",-1900,1100,-1414
"D","Highgate",-118,10,-118
"H","CITY","CONDITIONS","WIND","HIGH TEMP"
"H","","","","(F)"
"G","8. Weather Forecast Summary for the Peak Hour"
"D","Boston","rain","e-7",32
"D","Hartford","cloudy","nw-8",31
"H","DESCRIPTION","VALUE"
"H","",""
"G","9. SAR Available"
"D","NYISO","Yes"
"H","DESCRIPTION","VALUE"
"H","","(MW)"
"G","10. Capacity of Non-Commercial Units"
"D","Total Available",0
"G","11. Units Committed to Meet Minimum Operating Reserve and Replacement Reserve Requirements"
"D","2 Units",164
"H","DESCRIPTION","VALUE"
"H","",""
"G","12. Solar Magnetic Disturbance Activity"
"D","Forecast:",""
"D","Alert:",""
"D","Intensity:",""
"D","Observed Activity:",""
"D","Actions Taken or Planned by ISO-NE:",""
"D","Actions Taken or Planned by Other Control Areas:",""
"T","44 Lines"

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Sample HTML file for Morning Report

Morning Report

Download a CSV file of the Morning Report.

For the weekly forecast, please refer to the **Seven-Day Forecast.**

For an explanation of this report please refer to the **Morning Report Explained.**

1. Report Date
Sunday, Feb 15 2009 | 13:28:53 EST

2. Peak Load	(MW)
Saturday, Feb 14 2009 hour ending 19	18,466

3. Operable Capacity Analysis	(MW)
A. Capacity Supply Obligation (CSO)	34,666
B. Capacity Additions EcoMax Bid > CSO	76
C. Pre-OP4 Dispatchable Loads	0
D. Generation Outages and Reductions	3,132
E. Uncommitted Available Generation (non fast start)	9,898
F. Capacity Deliveries: Net Purchases = (-) Net Sales = (+)	
NYISO AC Ties	445
NYISO NNC	112
NYISO CSC	334
NB	445
Phase 2	-1,415
Highgate	-119
Net Deliveries	-198
G. Total Available Capacity (A+B+C-D-E-F)	21,910
H. Peak Load Forecast For Hour 19	19,600
I. Total Operating Reserve Requirement	2,222
J. Capacity Required	21,822
K. Surplus = (+) Deficiency = (-) (G - J)	88
L. Replacement Reserve Requirement	0
M. Excess Commitment Surplus = (+) Deficiency = (-) (K - L)	88

return to top

4. Largest First Contingency	(MW)

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MYS8 & 9	1,616

5. Annual Maintenance Schedule (A.M.S)	(MW)
Peak Load Exposure	21,212

6. Reserve Summary	(MW)
Ten Minute Reserve Requirement:	1,616
Ten Minute Reserve Estimate:	1,616
Thirty Minute Reserve Requirement:	600
Thirty Minute Reserve Estimate:	688
Expected ICU Operation	0
Expected Actions of OP 4:	0
Additional Capacity Available from OP 4 Actions:	0

return to top

7. Interchange Summary	(MW)	(MW)	(MW)
	TRANSFER LIMIT IN	TRANSFER LIMIT OUT	SCHEDULED CONTRACT
NYISO AC Ties	-1,300	1,100	444
NYISO NNC	-90	50	111
NYISO CSC	-336	336	333
NB	-900	500	444
Phase 2	-1,900	1,100	-1,414
Highgate	-118	10	-118

8. Weather Forecast Summary for the Peak Hour			
CITY	CONDITIONS	WIND	HIGH TEMP (°F)
Boston	rain	e-7	32
Hartford	cloudy	nw-8	31

9. SAR Available	
NYISO	Yes

return to top

10. Capacity of Non-Commercial Units	(MW)
Total Available	0

11. Units Committed to Meet Minimum Operating Reserve and Replacement Reserve Requirements	(MW)
2 Units	164

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12. Solar Magnetic Disturbance Activity
Forecast:
Alert:
Intensity:
Observed Activity:
Actions Taken or Planned by ISO-NE:
Actions Taken or Planned by Other Control Areas:

return to top

Morning Report Updated by System Operations and Reliability Operations

Download a CSV file of the Morning Report.

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Location and Data Extraction Method

The Morning Report interactive viewing and download at –
http://www/sys_ops/mornrpt/index.html.

Latest Morning Report Direct Download URL –
http://www/sys_ops/csvdocs/Morning_Report.csv

View the Morning Report with explanations –
http://www/sys_ops/mornrpt/index.html?view=explain

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Offer Threshold Price (OTP)

Data Available

Effective May 25, 2010 the daily Offer Threshold Price will be available. The Offer Threshold Price will normally be published each day by 10:00.

Using the interface, the user may select a date range of up to three months. The user may then download a CSV report that contains the Offer Threshold Price.

Sample Data in CSV Format

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Offer Threshold Price,
C,WW_OTP_ISO_20100410-20100411.csv,
C,Time Period: 04/10/2010-04/11/2010,
C,Report Generated: 2010-04-30 13:55:12 EDT,
H,Local Date,Offer Threshold Price
H,Date,$/MWh
D,04/10/2010,88.62
D,04/11/2010,88.62
T,2 lines
```

Location and Data Extraction Method

The daily Offer Threshold Price data is available for viewing at **http://www.iso-ne.com/histRpts/otp/WW_OTP_ISO_YYYYMMDD.csv**

http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Daily. You can simply place a check mark next to Offer Threshold Price, choose a date range and click the Display Results button. Click on the required report for the requested date.

The most recent version of each file can be downloaded from **http://www.iso-ne.com/histRpts/otp/WW_OTP_ISO__YYYYMMDD.csv.** Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data.

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Demand Reduction Threshold Price (DRTP)

Data Available

For the Price Responsive Demand transitional period effective June 1, 2012, a summary report and a detail report will be available for each month. The summary report includes the monthly Demand Reduction Threshold Price (DRTP), along with other related information. The Demand Response Threshold Price is calculated as the (historical threshold price * current month fuel index / reference month fuel index). The historical threshold price is determined based on the regression analysis of the smoothed reference month supply curve. The detail report includes the reference month supply curve data in the form of market-level price/quantity pairs, as well as any other adjustments. The reports will normally be published approximately fifteen days before the start of the following month.

Using the interface, the user may select the type of reports and a range of months. The user may then download CSV reports that contain the DRTP and other related data.

Sample Data in CSV Format for the Summary Report

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Demand Reduction Threshold Price Summary Report
C,Time period: 2012-06-01 to 2012-07-01
C,Report generated 2012-05-16 08:37:41 EST
H,Trading Month,Reference Month,Fuel Index Trading Month,Fuel Index Reference
  Month,Relevant Sample Range - Low,Relevant Sample Range - High,Coefficient
  A * 10000,Coefficient B,Coefficient C,R Square,Demand Reduction Threshold
  Price
H,Date,Date,$/MMBTU,$/MMBTU,$/MWh,$/MWh,,,,%,$/MWh
D,2012-06-01,2011-06-
  01,2.17,4.9,26.0,69.0,1.329887,1.115907,18.161704,99.8%,17.0
T,1 lines
```

Sample Data in CSV Format for the Detail Report

Note that some of these lines have been word-wrapped because of the limitations of page width. Hanging indentations indicates wrapping. In the actual file, the lines are continuous.

```
C,Demand Reduction Threshold Price Detail Report
C,Time period: 2012-06-01
C,Report generated 2012-05-16 08:37:26 EST
H,Trading Month,Reference Month,Offer MW,Offer Price
H,Date,Date,MW,$/MWh
D,2012-06-01,2011-06-01,18400,53.64
D,2012-06-01,2011-06-01,13025,35.62
D,2012-06-01,2011-06-01,10375,30.64
D,2012-06-01,2011-06-01,16050,44.0
D,2012-06-01,2011-06-01,20550,65.0
D,2012-06-01,2011-06-01,15625,42.94
D,2012-06-01,2011-06-01,14925,41.0
D,2012-06-01,2011-06-01,10400,30.65
T,8 lines
```


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Location and Data Extraction Method

The DRTP summary report is available for viewing at **http://www.iso-ne.com/transform/csv/drtp?start={YYYYMMDD}&end={YYYYMMDD}**; The DRTP detail report is available for viewing at **http://www.iso-ne.com/transform/csv/drtpdetail?start={YYYYMMDD}**; Note: You will need to replace the YYYYMMDD in the given URL with the date stamp for the day for which you are seeking data.

http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Monthly. You can simply select a report type of "Monthly Data", place a check mark next to Demand Reduction Threshold Price summary and/or Demand Reduction Threshold Price detail, choose a date range and click the Display Results button. Click on the required report for the requested date. Results will be based on data availability and will be provided as monthly reports.

Web Services

- /drtp/current
- /drtp/day/{day}
- /drtp/detail/day/{day}
- /drtp/info

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Performance Strategies

There are some strategies that can be undertaken to increase your performance of retrieving data from the ISO New England website. The reason for utilizing these performance measures is to reduce network bandwidth and increase availability for all interested. A particular company may have multiple users requesting the same data on the same frequency. This is magnified over multiple companies and can affect the availability of access to the data during peak times.

One recommendation is to schedule any automatic processes to coincide with the timing of data availability. An example of this is to request five-minute data once every five minutes.

Another recommendation to increase your network throughput is to use a Squid Proxy. With the addition of a Squid proxy, users scraping data from ISO New England will see an improvement in performance with data retrieval. A Squid Proxy allows data scrapers to save on their bandwidth through content caching. Cached content means data is served locally and users will see this through faster download speeds with frequently-used content. Squid is one of the oldest content accelerators, used by thousands of websites around the world to ease the load on their servers. Frequently-seen content is cached by Squid and served to the end-client with only a fraction of the application server load needed normally. Setting up an accelerator in front of an existing website is almost always a quick and simple task with immediate benefits. The Squid Proxy is an open source proxy server. More information can be found at http://www.squid-cache.org/.

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Sample Programs

As a guide to acquiring this operational data, ISO New England has included example Perl scripts in this document. These scripts require a recent version of Perl, version 5.6.1 or later. All of the scripts also require additional modules, documented in the appropriate section.

Perl and Perl modules for Unix systems are available for free download from **http://cpan.perl.org**. The easiest way to install Perl modules on Unix systems is to use the CPAN module, which is part of the standard Perl distribution. Provided that your Perl installation is correctly configured and you are running as super user, issuing the command **perl -MCPAN -e 'install LWP::Request'; perl -MCPAN -e 'install LWP::UserAgent'** will install the LWP::Request and LWP::UserAgent packages. This does, however, rely on the correctness of your Perl configuration and having 'superuser access to the operating system. Please use proper caution.

There are several options for Perl on Windows. ActiveState Perl, a free version of Perl for Windows, is available from **http://www.activestate.com**. ActiveState also offers commercial development environments for Perl, but they offer a basic Perl environment for free. Provided that your ActiveState Perl installation is correctly configured and you have all the necessary access privileges, issuing the command **ppm install LWP::UserAgent** and **ppm install LWP::Request** will install the LWP::Request and LWP::UserAgent packages. This relies on the correctness of your Perl configuration and having appropriate access privileges. Please use proper caution.

There are other options for running Perl on Windows, but it is beyond the scope of this document to discuss them extensively. IndigoPerl, another version of Perl for Windows, is available from **http://www.indigostar.com/indigoperl.htm**. Perl is also included in Cygwin, a complete Unix-like operating environment designed to sit on top of the Windows API. Cygwin is available from **http://www.cygwin.com**.

Note: These scripts are made available to the customers of ISO New England without guarantee of correctness. We have determined that they function as described in our test environment. However, this is not an indication that they will function as expected in any other environment. *These scripts are provided as reference examples only. ISO New England does not provide any Perl training or support.*

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Retrieve File From Script

```
#!/usr/bin/perl

use strict;

use LWP::Request;    # Light Weight Protocol - GET, HEAD, POST
use LWP::UserAgent;  # WWW UserAgent class - for making a simple "browser"

# Request the day of the month ( 1 to 31 ),
# the month ( 0 to 11 ), and
# the year ( number of years since 1900 ).

# Request current file.
my $URL = "http://www.iso-ne.com/markets/5min_data/fiveMinLMP.do?submit=latest" ;
my $requestURL = new HTTP::Request (GET=> $URL);

# Create Browser
my $userAgent = LWP::UserAgent->new();
my $resultPage = $userAgent->request($requestURL)->as_string;

# This will contain the contents of the request File.
print $resultPage;
```


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Retrieve File from direct URL

```
#!/usr/bin/perl

use strict;

use LWP::Request;    # Light Weight Protocol - GET, HEAD, POST
use LWP::UserAgent;  # WWW UserAgent class - for making a simple "browser"

# Request the day of the month ( 1 to 31 ),
# the month ( 0 to 11 ), and
# the year ( number of years since 1900 ).
my ($yday, $ymon, $yyear) = (localtime())[3,4,5];
my $todaysDate = sprintf("%4.4d%2.2d%2.2d",
          $yyear+1900, $ymon+1, $yday);

# Request Today's file.
my $URL = "http://www.iso-ne.com/histRpts/actual-interchange/act_int_".$todaysDate.".csv";
my $requestURL = new HTTP::Request (GET=> $URL);

# Create Browser
my $userAgent = LWP::UserAgent->new();
my $resultPage = $userAgent->request($requestURL)->as_string;

# This will contain the contents of the request File.
print $resultPage;
```


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