



# **User Guide for External Transactions using EES**

## **—Tasks Section —**

|                               |                       |
|-------------------------------|-----------------------|
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# Change Summary

| <b>Revision</b> | <b>Transmittal #</b> | <b>Date</b>   | <b>Comments</b>  |
|-----------------|----------------------|---------------|--|
| 1.0             |                      | Feb 27, 2003  | First release of this Section for Go Live. [GED]   |
| 2.0             |                      | February 2004 | <ul style="list-style-type: none"> <li>• Updates made to reflect EES Version 2.5.5</li> <li>• Screen shots replaced to reflect new/deleted buttons on main menu and Organizer</li> <li>• Correction made to the price range allowed for RT Dispatchable transactions</li> <li>• Added detailed Special Exception information</li> <li>• Added description of automatic checking that occurs due to NERC Tag changes</li> <li>• Removed Batch Submit section</li> <li>• Added clarification on linking OASIS for modified transactions</li> <li>• Added description of new Net Flow function</li> <li>• Screen captures, editorial and clarification changes made, as necessary</li> </ul>                        |
| 3.0             |                      | November 2004 | <ul style="list-style-type: none"> <li>• Main objective of this release was to eliminate the dependence on Microsoft JVM. Sun Java is now utilized.</li> <li>• NRTG OASIS button converted to INTERFACE; information only required to be entered once for any transaction</li> <li>• External OASIS button title converted to OASIS</li> <li>• Special Exception user entry modified; separate comment now entered for each selected exception</li> <li>• User should be aware of corresponding File Upload format changes for above three items</li> <li>• Removal of Ramp validation upon submittal</li> <li>• Redesign of the Ramp Viewer</li> <li>• User can open ISO-NE Web Site from within EES</li> </ul> |
| 4.0             |                      | February 2005 | <ul style="list-style-type: none"> <li>• Change all references relating to NEPOOL to corresponding RTO terminology</li> </ul>  |
| 5.0             |                      | June 2008     | <ul style="list-style-type: none"> <li>• Change in look and feel of application to be consistent with corporate identify standards</li> </ul>  |
| 6.0             |                      | June 2010     | <ul style="list-style-type: none"> <li>• File Download information updated</li> <li>• Change Special Exceptions for Forward Capacity Market</li> </ul>   |

|     |  |                |  |
|-----|--|----------------|--|
| 7.0 |  | May 2013       | <ul style="list-style-type: none"> <li>• Change to generic reference to Day Ahead Market deadline</li> <li>• Changes to Ramp Viewer and Net Flow display to reflect different timing categories</li> </ul> |
| 8.0 |  | December 2015  | <ul style="list-style-type: none"> <li>• Update to reflect implementation of Coordinated Transaction Scheduling</li> </ul>   |
| 9.0 |  | September 2018 | <ul style="list-style-type: none"> <li>• Allowing hourly variation for price on DA transaction</li> </ul>  |



## **Preface**

### **Purpose**

This User Guide will serve as a reference document for the specific purpose of explaining tasks associated with transacting External Transactions within the ISO New England (ISO) marketplace using the Enhanced Energy Scheduling (EES) application. The EES User Guide is divided into two distinct documents: the Reference document and the Task document. The former explains the general concepts for using the application while this Tasks document goes into greater detail for specific tasks within the application.

On Coordinated Transaction Scheduling (CTS) Enabled Interfaces, Real-Time External Transactions must be submitted into the NYISO Joint Energy Scheduling System (JESS). Please see their website for the associated user guide.

### **Assumptions**

It is assumed that the user is familiar with using web-based applications and web-browser navigation. The user should have a good understanding of the basic business rules behind ISO New England energy scheduling to properly use the EES application.



# 1. Web Application Access

The Enhanced Energy Scheduling (EES) application is accessed through Internet facilities with the following web browser:

- Internet Explorer 6.x or greater supporting SSL 3.0 secured 128-bit encryption

Additional software and hardware requirements for accessing the ISO New England SMD marketplace are listed on the ISO New England web page at: <http://www.iso-ne.com>

All users need to register with the Customer Service Department within ISO New England to submit and view information in the EES application for the purpose of taking part in the ISO New England SMD Marketplace.

Registration for market system users can be done by going to the registration area of the ISO New England web page at: <http://www.iso-ne.com/>.

Once registered, market system users will be provided with the link to access the SMD home page, which will then allow direct access to SMD software applications.

Access to the SMD Sandbox will also be restricted to registered market system users. Questions or inquiries about market access should be addressed to the Customer Service Department at ISO New England.



## 2. Business Rules and Timeline

The associated business rules and timeline can be found in the document *Market Rule 1* and other ISO New England Manuals on the ISO New England web page.



## 3. Getting Started

### Logging on to EES

Once you have entered the appropriate SMD Markets web address, you can select the digital certificate that allows access to the Enhanced Energy Scheduler application (EES). The following screen will appear. Click "**Enter EES**" to begin. At any time in the EES application, you may click the ISO New England logo to open a new window connecting you to the ISO New England Web site.

ISO new england

EES

File Upload

Download RT Actuals

Download Submittals

Send Email

©2004  
ISO New England, Inc.  
©2001  
ALSTOM ESCA Corp.  
©1999  
PJM Interconnection L.L.C.

Enter EES

Current Release: 4.4. Released on 06/16/2009

Release Notes for 4.5, released on 03/01/2010

- New Exception Type: "Import Resource", "Flex Reservation", "LSCC Export", "Unconstrained Export"
- Modified Exception Type: "Non\_Recallable Export" to "Non\_CS0 Export"
- MW may be modified during the Re-Offer Period on previously submitted RTM transactions.

Release Notes for 4.4, released on 06/16/2009

- Modified Download Actuals to include Reason
- Added Download capability to retrieve submitted transactions
- Changed OASIS deadline for dispatchable ICAP using 'flexible' reservations
- Upgrade JRE to 1.6.0\_13

Release Notes for 4.3, released on 11/20/2008

- MEPCO Rollin, NB realtime schedule does not need Oasis reservation
- New Exception Type: "Grandfathered"
- NB DayAhead interface is changed from "ME NRTG INT" to "NB NE BORDER"
- Bug fix for "DayAhead Price Update" validation

Release Notes for 4.2, released on 06/03/2008

- DAM Fixed and Dispatchable transactions must have the same source and sink Pnode
- Price may be modified during the Re-Offer Period on previously submitted RTM priced transactions

Release Notes for 4.1.1, released on 11/21/2007

.I.SALBRYNB345 1 replaces .I.KESWICK 345 1 for DAM Source/Sink name, effective 12/1/2007 00.00. The key data are

#### Notes:

1. Contact your company's System Administrator if you are unable to log on to the ISO New England EES web pages.
2. If this is your first time in EES, click the "**Additional Hardware/Software Configuration**" button on the entry page. This defines how your browser must be configured to successfully access and submit external transactions in EES.

## Viewing Existing External Transactions

External Transmission Customers, its agents, and ISO New England can select and view existing external schedules that have been submitted for consideration in the Day-ahead or the Real-time Markets.

### After You Are Logged On:

Market Participants use the **Schedule Organizer** web page to view existing external transactions. This is the screen that will appear immediately after logging into EES.

Queries for existing transactions can be filtered by date or status fields, located in the schedule header. After any modification to the filter, you must select the Refresh button.

The transactions shown in the **Schedule Organizer** can then be sorted by any of the columns. Simply click on the column heading to sort by the data in that column.

The size of the columns may also be modified by selecting the line in between columns and dragging it left or right. The others columns will automatically resize to fit all columns on the screen at once.

**Schedule Organizer**

Select date  
 From: 01/13/2010  
 To: 05/13/2010

Select status  
 Working  
 Pre-Approved  
 Submitted  
 Approved  
 Pending Action  
 Denied  
 Day-Ahead

Sort  
Refresh

| Co... | D-A | R-T | ISO-NE ID | Schedule Na... | Tag Name         | Outsid... | Start Date       | End Date         | Interface    | Status      | Flag        | Act... |
|-------|-----|-----|-----------|----------------|------------------|-----------|------------------|------------------|--------------|-------------|-------------|--------|
| F     |     |     | 596632    |                |                  |           | 04/17/2010 00:00 | 04/18/2010 00:00 | HQ Ill Im... | Pending ... | Invalid Tag | ?      |
| F     |     |     | 596657    |                |                  |           | 05/04/2010 00:00 | 05/05/2010 00:00 | NY N Imp...  | Pending ... | Invalid Tag | ?      |
| F     |     |     | 596658    |                |                  |           | 05/04/2010 00:00 | 05/05/2010 00:00 | NY N Exp...  | Pending ... | Invalid Tag | ?      |
| F     |     |     | 596659    |                | ISNE_ISNECLMA... |           | 05/04/2010 05:00 | 05/05/2010 00:00 | NY N Exp...  | Pending ... | Invalid Tag | ?      |
| F     |     |     | 596660    |                | ISNE_ISNECLMA... |           | 05/10/2010 00:00 | 05/12/2010 00:00 | NY N Exp...  | Approved    |             |        |
| F     |     |     |           |                |                  |           | 05/10/2010 00:00 | 05/12/2010 00:00 | NY N Exp...  | Denied      | Invalid Tag | ?      |
| F     |     |     |           |                |                  |           | 05/11/2010 15:00 | 05/12/2010 00:00 | NY N Exp...  | Pre-Appr... |             |        |

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 ISO New England, Inc.

**To view an existing external schedule:**

1. If you know the ISO-NE ID number of the schedule that you want to view:
  - Click the **Retrieve** button located at the bottom of the Organizer page
  - Type the ISO-NE ID number in the field of the dialog that displays
  - Click the **OK** button to retrieve the specified schedule.
2. If you do not know the ISO-NE ID number of the schedule that you want to view:
  - In the Schedule Organizer **Select Date Block**, type the date range in the respective fields (format: *mm/dd/yyyy*).
  - Click the **Refresh** button to perform the query.
  - Click the ISO-NE ID number of the schedule whose details you want to view.
3. The schedule displays in calendar view (the default) in the Scheduler page.

## Creating a New External Transaction

A new transaction can be created from any web page within EES by selecting the Create New button at the bottom of the screen. The steps outlined here are the general steps to create a new transaction. The details for transactions in each market are contained in future sections.

1. While in Schedule Organizer, or Scheduler web page click the **Create New** button located on the bottom of the page; a blank Scheduler page displays.

**Scheduler**  
 ISO-NE ID:  Schedule Name:  Outside ID:   
 User Name: Cheryl Mendrala Last Updated By:  Status:

**Path Builder**  
 Direction: Import to ISNE   
 Path: 

| Path                 | Start                | Stop                 |
|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> |

10/30/2015  

| Sunday     | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|------------|--------|---------|-----------|----------|--------|----------|
| 25 October | 26     | 27      | 28        | 29       | 30     | 31       |
| 1 November | 2      | 3       | 4         | 5        | 6      | 7        |
| 8          | 9      | 10      | 11        | 12       | 13     | 14       |
| 15         | 16     | 17      | 18        | 19       | 20     | 21       |
| 22         | 23     | 24      | 25        | 26       | 27     | 28       |

**Views**  
   
**Edit**  
   
     
  
 Start: 0 :00   
 Stop: 24 :00   
 MW:   
**Graphit**  

| Start                | Stop                 | MW                   |
|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> |

  
 MWh: 0.0

R/T Only  R/T and D/A

2. If desired, type a name for this schedule in the **Schedule Name** field.  
 If desired, type the **Outside ID** in the corresponding field.
3. In the Path Builder data block, select a value from the **Direction** drop-down list:
4. Click the cursor in the white area of the **Path** text box to display the Path drop-down list.
5. Click the down arrow on the **Path** drop-down list and select the path for this schedule. Once this value is selected, it cannot be changed.

**Note:** Only valid paths are available for selection, according to the direction selected.

6. At this point, the Day Ahead or Real-Time market distinction must be made. Future sections address how to submit transactions to each of these markets.



## 4. Day-Ahead Market

This section defines the steps involved in creating, submitting and modifying a Day-Ahead external transaction. The business rules and submittal deadlines for Day-Ahead market external transactions are defined in ISO New England Manual 11.

### Data Requirements

The following information must be provided to submit a Day-Ahead External Transaction:

- Direction (Import or Export)
- Path
- Source and Sink Interface
- Source and Sink PNode—one of which must be an External Node
- Type of transaction (Fixed, Dispatchable, Congestion)
- Energy Schedule
- Price, if applicable
- eTag ID, only required for CTS Enabled Interface
- Special Exception, only required for Import Capacity Resources on the CTS Enabled Interface

**Note:** OASIS reservations are not required for Day-ahead External Transactions.

### Day-Ahead Market External Transaction Statuses

Upon submittal, automated validation is performed on the Day-Ahead market external transaction. Below are the statuses that may be assigned to a Day-Ahead market external transaction

|                  |   |
|------------------|---|
| <b>Requested</b> | Indicates that a valid submittal and will be considered in the DAM  |
| <b>Result</b>    | Indicates that the schedule has cleared the DAM   |
| <b>Invalid</b>   | Indicates that the schedule was in some way invalid (e.g. submitted via file upload for a date in the past) |

**Note:** A transaction that contains both DAM and RTM energy schedules—may show a status of either market, depending on which market is currently selected in the Edit panel.

## Creating a Day-Ahead Schedule

The basic steps involved in creating a schedule are:

- Entering general information
- Defining the path
- Creating an energy profile
- Selecting a source and sink
- Submitting the schedule

### Enter General Schedule Information:

1. Click the **Create New** button located on the bottom of the page; a blank Scheduler page displays.
2. Select the **Day Ahead** button in the Edit Panel. This updates the energy notepad to allow entry of the Day Ahead energy profile
3. If desired, type a name for this schedule in the **Schedule Name** field (16-character limit).
4. If desired, type a name for this schedule in the **Outside ID** field (16-character limit).

### Define the Path:

1. Select the direction from the **Direction** drop-down list.
  - Only "Import to ISNE" and "Export from ISNE" are valid Day Ahead Market selections
  - Wheel-through are not allowed in the Day Ahead market
2. Click the cursor in the white area of the Path text box to display the **Path** drop-down list.

3. Click the DOWN ARROW on the **Path** drop-down list and select the path for this schedule. This dropdown list is propagated based on the selected Direction
4. The Path cannot be changed once selected.

### Create the Energy Profile:

1. In the calendar view click on the date for which you want to enter an energy profile.
  - A yellow rectangle highlights the selected date
  - To select multiple days, hold down the ctrl key while clicking those dates on the calendar.
  - Double-clicking the cursor on this date will present the Single Day view.
2. Click the radio button corresponding to the desired type of transaction: Fixed, Congestion, Dispatchable
3. In the **Start** and **Stop** fields of the edit box, type or use the spin box arrows to provide the start and stop times for this schedule.
4. In the energy notepad, click the cursor in the **MW** field and type the megawatt value for this schedule.
5. If Dispatchable or Congestion were selected as the transaction type, type the value for price in the corresponding field.
  - The price value for Dispatchable must be between -\$150.00 and \$1000
  - The price value for Congestion must be between \$0.01 and \$25
  - The price value may vary every hour
6. In the edit box, click the **GraphIt** button to graph the energy profile in the calendar and to display it numerically in the edit box.
  - If the **GraphIt** button is gray and cannot be selected - you are trying to enter Day Ahead Market energy past the submittal deadline.
  - If you make a mistake, right-click the calendar date that you want to correct and select **Reset** from the floating menu and repeat the previous steps.

**Edit**

Day Ahead  
Source/Sink

Real Time  
Real Time/Price  
Interface  
OASIS

eTag ID

Start: 0  :00

Stop: 24  :00

MW:

Fixed

Congestion \$

Dispatchable \$

**GraphIt**

| Start | Stop | Type | MW | Price |
|-------|------|------|----|-------|
|       |      |      |    |       |

### Select Source and Sink:

**Edit**

Day Ahead  
Source/Sink

Real Time  
Real Time/Price  
Interface  
OASIS

eTag ID

Source I/F:  
Sink I/F:  
Source :  
Sink :

1. In the Edit Panel, click the **Source/Sink** button to display the edit box for creating a DAM schedule.
2. Click the DOWN ARROW on the **Source I/F** field and select the desired interface from the drop-down list.
3. Click the DOWN ARROW on the **Sink I/F** field and select the desired interface from the drop-down list.
  - Either the Source I/F or the Sink I/F will have "ISNE PTF" as the only option.
4. Click the DOWN ARROW on the **Source** field and select the Source PNode from the drop-down list
5. Click the DOWN ARROW on the **Sink** field and select the Sink PNode from the drop-down list.
  - For Up-to Congestion, the Source and Sink PNodes must be different.
  - For Fixed and Dispatchable, the Source and Sink PNodes must be the same.

### Submit the Schedule

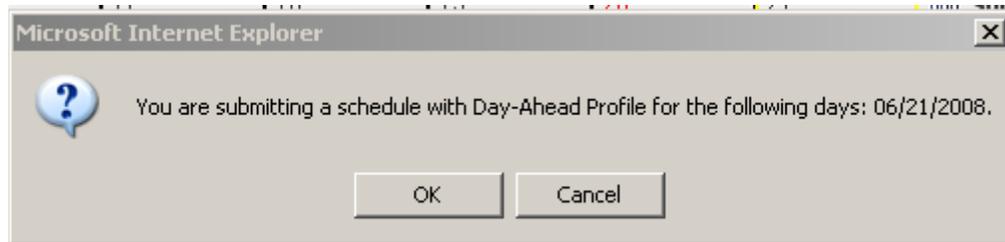
1. Click the **Submit** button located at the bottom of the page.

---

**Important:** A DAM schedule cannot be *Saved* but must be Submitted.

---

2. A dialog confirming your submission displays; click the **OK** button to complete the schedule submission.



3. When the submittal is complete:
  1. The **ISO-NE ID** field is auto populated with a unique ID number
  2. Your logon name displays in the **Last Updated By** field
  3. The **Real-Time** button will be highlighted.
4. Re-select the **Day Ahead** button to view your submitted energy profile.
  1. On the calendar, select the day on which your energy profile was created
  2. The **Status** field should say "Requested"

## Modifying An Existing DAM External Schedule

DAM External Schedules cannot be modified after submittal deadline for the Day Ahead Energy Market the day before the Operating Day.

Prior to that deadline, these aspects of a schedule can be modified:

- MW profile
- Price

**Note:** Direction, Path, Source, Sink cannot be changed. Also, the 'type' of DAM transaction (i.e. Fixed, Dispatchable, Congestion) cannot be modified once the transaction has been submitted.

To modify an existing day-ahead schedule:

1. Click the **Retrieve** button located on the bottom of the page to open the schedule that you want to modify.
2. Select the **Day Ahead** button.
3. Select the day on the calendar for which you want to modify the energy profile.
4. If adding energy on a new day, select the radio button for the desired type of transaction.
5. Enter the Start, Stop, MW and Price values for desired profile using the energy notepad.
6. Click **GraphIt**
  - You will see the new profile on the graph to the left in a different color than the original profile (select the KEY icon next to the status to review the color coding)

**Edit**

Day Ahead  
Source/Sink

---

Real Time  
Real Time/Price  
Interface  
OASIS

---

eTag ID

---

Start:

Stop:

MW:

Fixed  
 Congestion \$   
 Dispatchable \$

GraphIt

| Start | Stop | Type | MW | Price |
|-------|------|------|----|-------|
|       |      |      |    |       |

7. Click the **Submit** button to submit the modified schedule.
8. You will be prompted by the confirmation message below, click **OK** submit the schedule.



- When validations have been completed, the Last Updated By field will be modified with the current time and the **Real Time** button will be highlighted
- Select the **Day Ahead** button to review the modifications made to the schedule



## 5. Real-Time Market

This section defines the steps involved in creating, submitting and modifying a Real-Time market external transaction. The business rules and submittal deadlines, including those specific rules for CTS Enabled Interface, for Real-Time market external transactions are defined in Manual 11 .

### Data Requirements

The following are required to receive Pre-Approved status when creating an RTM:

- Direction (Import, Export or Wheel-Through)
- Path/Interface
- Type of transaction (Fixed, Dispatchable)
- Energy schedule
- Price, if applicable
- Interface
- OASIS ID, if applicable
- Valid eTag ID

### Real-Time Market External Schedules Statuses

|                       |  |
|-----------------------|--|
| <b>Pending Action</b> | Indicates that the transaction requires further input from user (typically missing or invalid e-Tag).  |
| <b>Pre-Approved</b>   | Indicates that the transaction passed all automated validations.   |
| <b>Approved</b>       | Indicates that the transaction passed review by the ISO New England TSO Scheduler.   |
| <b>Denied</b>         | Indicates that the transaction is invalid. Possible reasons for that denial could be that it was submitted via file upload after the submittal deadline. Transaction may be denied for other reasons, which are indicated in the 'Action Required' dialog. |

**Note:** A transaction that contains both DAM and RTM energy schedules—may show a status of either market, depending on which market is currently selected in the Edit panel.

## Creating a Real-Time Schedule

The basic steps involved in creating a schedule are:

- Entering general information
- Defining the path
- Creating an energy profile
- Selecting the associated external interface(s)
- Linking an external OASIS, if applicable
- Linking a NERC e-Tag
- Linking a Special Exception, if applicable
- Submitting the schedule

---

**Note:** Real-time without Price and Real-time with price are mutually exclusive; you can select one but not both for a schedule.

---

### Enter General Schedule Information:

1. Click the **Create New** button located on the bottom of the page; a blank Scheduler page displays.
2. Select the **Real Time** button, for a Fixed transaction, or the **Real Time/Price** button, for a Dispatchable transaction, in the Edit Panel. This updates the energy notepad to allow entry of the Real Time energy profile
3. If desired, type a name for this schedule in the **Schedule Name** field (16-character limit).
4. If desired, type a name for this schedule in the **Outside ID** field (16-character limit).

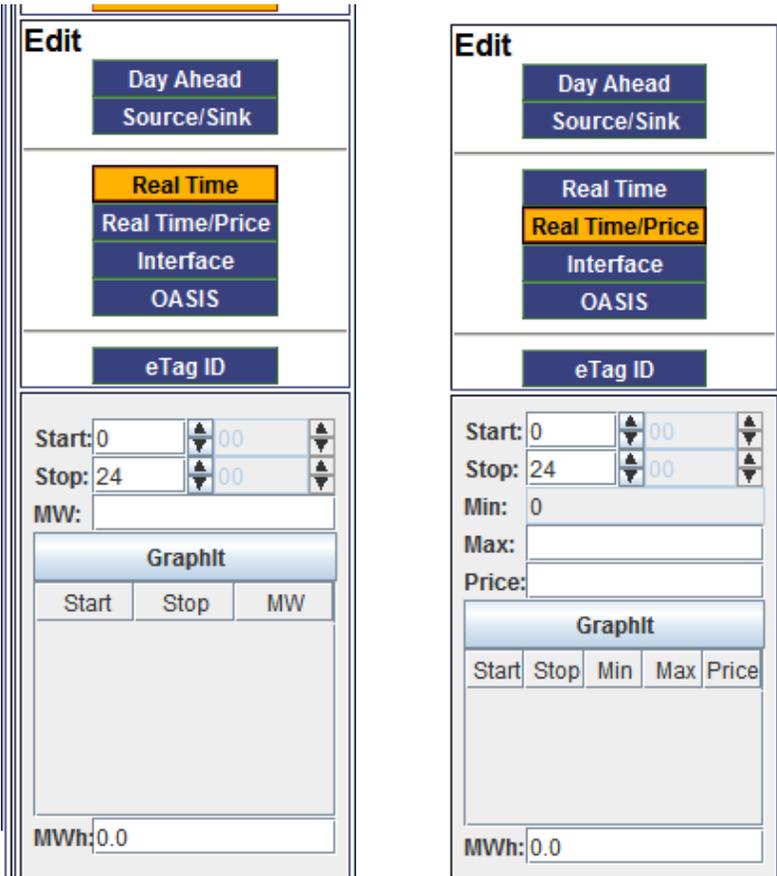
The screenshot displays the 'Scheduler' interface. At the top, there are input fields for 'ISO-NE ID', 'Schedule Name', and 'Outside ID'. Below these are 'User Name: Cheryl Mendrala' and 'Last Updated By:'. A 'Status' field with a key icon is also present. The 'Path Builder' section features a 'Direction' dropdown menu set to 'Import to ISNE' and a table with columns for 'Path', 'Start', and 'Stop'. The bottom navigation bar includes 'Save myProfile', the date '10/30/2015', and 'Retrieve myProfile', along with a calendar view where 'Friday' is highlighted. On the right side, an 'Edit' panel contains several buttons: 'Single Day', 'Calendar', 'Day Ahead', 'Source/Sink', 'Real Time', 'Real Time/Price', 'Interface', 'OASIS', and 'eTag ID'.

**Define the Path:**

1. Select a direction from the **Direction** drop-down list.
2. Click the cursor in the white area of the Path text box to display the **Path** drop-down list.
3. Click the DOWN ARROW on the **Path** drop-down list and select the path for this schedule. This dropdown list is propagated based on the selected Direction
4. The Path cannot be changed once selected.

**Create the Energy Profile:**

1. In the calendar view click on the date for which you want to enter an energy profile.
  - A yellow rectangle highlights the selected date
  - To select multiple days, hold down the ctrl key while clicking those dates on the calendar.
  - Double-clicking the cursor on this date will present the Single Day view.



In the **Start** and **Stop** fields of the edit box, type or use the spin box arrows to provide the start and stop times for this schedule.

2. In the energy notepad, click the cursor in the **Max** field and type the megawatt, MW, value for the selected timeframe.
3. If **Real Time/Price** was chosen you must also enter a value in the **Price** field. The units of this field are dollars, \$.
  - The price must be between -\$150 and \$1000
  - Schedule can have more than one price per day, as many a one value per hour
4. In the edit box, click the **GraphIt** button to graph the energy profile in the calendar and to display it numerically in the edit box.
  - If the **GraphIt** button is gray and cannot be selected - you are trying to enter Real Time Market energy past the submittal deadline.
  - If you make a mistake, right-click the calendar date that you want to correct and select **Reset** from the floating menu and repeat the previous steps

### Select External Interface(s)

1. Ensure the desired day(s) is highlighted on the calendar. In the Edit Panel, click the **Interface** button to display the edit box for linking the external interface for the schedule.
2. In the edit box, use the **Interface** drop-down list to select the appropriate external interface for your transaction. This list is propagated based on the selected Direction.
3. Click the **Link** button to associate the desired external interface with this schedule.
  - If you have selected the wrong interface, select the link in the text area and click the **Remove** button.
  - Only one selection can be applied to a schedule. You cannot have a different interface on a different day in the same schedule.

The screenshot shows the 'Edit' panel with the following elements:

- Edit** (Title)
- Buttons: Day Ahead, Source/Sink
- Buttons: Real Time, Real Time/Price, **Interface** (highlighted), OASIS
- Button: eTag ID
- Section: **Interface:**
- Buttons: Link, Remove
- Text Area: Interface

**Link OASIS Information**

1. In the Edit Panel, click the **OASIS** button to display the edit box for linking OASIS reservations with a schedule. This OASIS reservation is mainly for those interfaces that require separate pre-arranged OASIS service. This OASIS reservation is not for reservations associated with other control areas. There are a limited number of pre-existing OASIS reservations on PTF interfaces that would also use this button to link their applicable reservation.
  
2. In the External Reservations edit box, type the reservation ID in the **Res. ID** field.
  - This value must be numeric
  
3. Click the **Link** button to associate the defined External OASIS ID with this schedule.
  - The ID and direction display in the text area.
  - (To remove this ID link, select the link in the text area and click the **Remove** button.)

**Edit**

Day Ahead  
Source/Sink

Real Time  
Real Time/Price  
Interface  
OASIS

eTag ID

OASIS Reservations:

Res ID:

Link Remove

ResId

## Link e-Tag ID

1. In the Edit Panel, click the **e-Tag ID** button to display the edit box for linking NERC e-Tag with a schedule.
2. In the e-Tag edit box, use the **e-Tag ID** field drop-down list to select the tag ID,  
  
or,  
  
if you know the e-Tag ID, type it in the **e-Tag ID** field.
3. Click the **Link** button to associate the selected e-Tag ID with this schedule.
  - The ID displays in the text area.
  - To remove this ID link, select the link in the text area and click the **Remove** button.

### Notes:

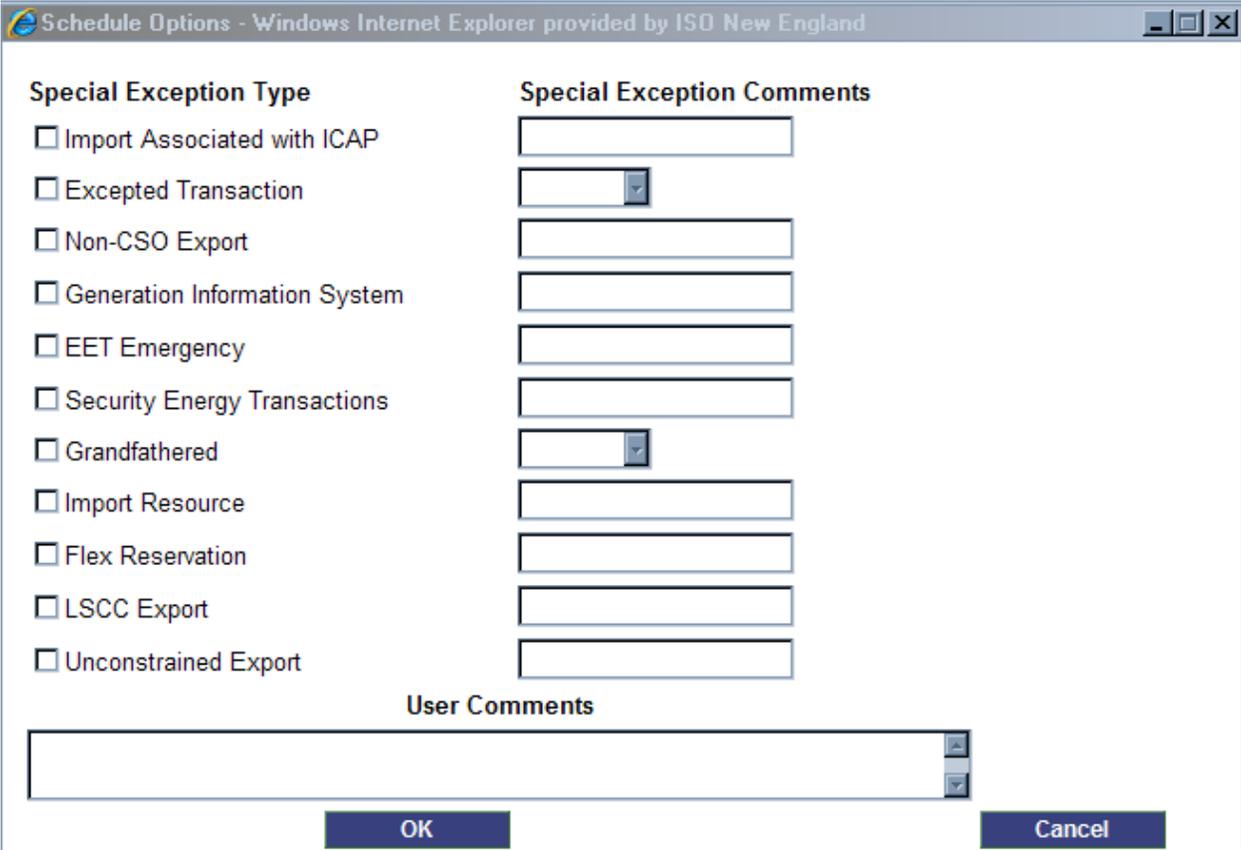
- Only one e-Tag may be linked to a transaction
- Once the transaction has been approved, the e-Tag may not be modified or removed
- Once the transaction has been approved, the e- Tag ID may not be modified or removed

The screenshot shows a user interface for linking an e-Tag ID. It is divided into two main sections. The top section, titled "Edit", contains a list of schedule options: "Day Ahead", "Source/Sink", "Real Time", "Real Time/Price", "Interface", and "OASIS". Below this list is a yellow button labeled "eTag ID". The bottom section, titled "NERC Tag:", contains a dropdown menu, "Link" and "Remove" buttons, and a text area labeled "Associated Nerc Tag".

**Link a Special Exception (optional)**

- 1. In Scheduler, click the **Options** button located at the bottom of the page in the R/T Only button group.

The Schedule Options dialog displays.



- 2. As many Exceptions as are applicable to your transaction may be selected by checking the box to the left of the exception type.
- 3. Type a comment in the corresponding comment field as defined in Manual 11 and the *EES Upload and Download File Format* document available on the ISO-NE website .

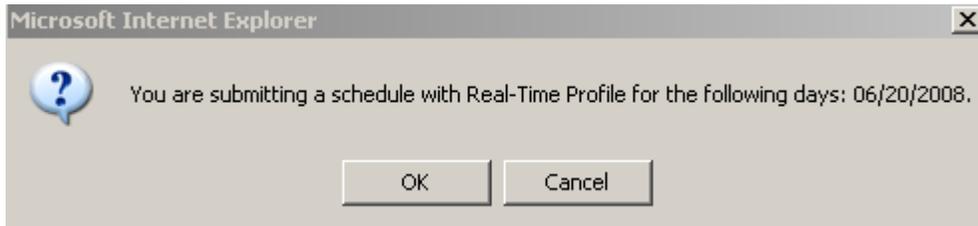
4. Click the **OK** button to associate the Special Exception with the schedule.

**Notes:**

- The selected Special Exception applies to all profiles within that schedule
- The Special Exception should be added at the time the schedule is created
- The user may edit the Special Exception until the transaction becomes Approved. .
- Once entered, an icon, , will appear next to the status field to denote that a Special Exception has been selected

### Submit the Schedule

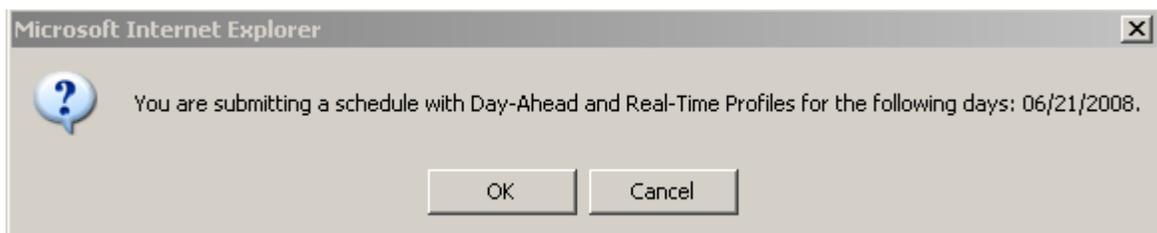
1. Click the **Submit** button located at the bottom of the page.
2. A dialog confirming your submission displays; click the **OK** button to complete the schedule submission.



3. When the submittal is complete:
  - The **ISO-NE ID** field is auto populated with a unique ID number
  - Your logon name displays in the **Last Updated By** field
  - The **Real-Time** button will be highlighted.
4. On the calendar, select the day on which your energy profile was created
  - The **Status** field will reflect the results of the automated validation

### Notes:

- If there is a "?" next to the status field, there was an error/warning generated during the validation. Click on the "?" to view the error/warning.
- The linked NERC e-Tag will be validated against your schedule upon submittal. Therefore, you should ensure that your e-Tag exists and matches your schedule prior to submitting the transactions. The NERC e-Tag must be successfully validated to obtain *Pre-Approved* status. However, EES will continue to validate the transaction against a change in the referenced NERC Tag. If the tag is adjusted to match the transaction, the transaction status will automatically change to Pre-Approved.
- If you are submitting a schedule with both Day Ahead and Real Time profiles on the same transaction, a dialog confirming that submission will display.



## Modifying An Existing RTM External Schedule

This section defines how the changes are made to a Real-Time transaction. All business rules regarding submission deadlines can be found in ISO New England Manual 11. After initial submittal, the energy profile, OASIS ID and e-Tag ID on a schedule may be modified. However, the Direction, Path and external interface may not be modified after initial submittal. After every modification, the transaction must be resubmitted.

### To modify an existing RTM schedule:

1. Click the **Retrieve** button located on the bottom of the page to open the schedule that you want to modify.
2. In the Scheduler display, the appropriate **Real Time** or **Real Time/Price** button will be highlighted.
3. Select the day on the calendar for which you want to modify the energy profile.
4. Enter the Start, Stop, MW and Price values for desired profile using the energy notepad.
5. Click **GraphIt**
  - You will see the new profile on the graph to the left in a different color than the original profile (select the KEY icon next to the status to review the color coding)
  - Because there is more than one status to the energy profile (more than one color on the graph), the total MWh in the field at the bottom of the notepad is not filled in.
6. Unless there has been a change to the OASIS or e-Tag ID, no additional action is required in EES to modify a transaction.

**Edit**

Day Ahead  
Source/Sink

**Real Time**  
Real Time/Price  
Interface  
OASIS

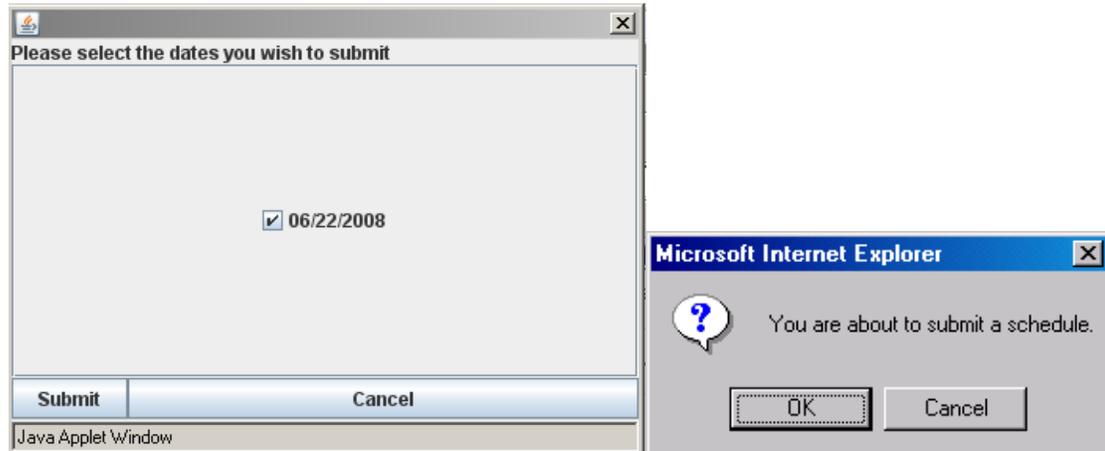
eTag ID

Start: 0    00  
Stop: 24    00  
MW:

| GraphIt |      |    |
|---------|------|----|
| Start   | Stop | MW |
|         |      |    |

MWh: 0.0

7. Click the **Submit** button to submit the modified schedule.
8. You will be prompted by a message similar to one of the two below, depending on what was modified in the transaction. Click the appropriate confirmation to continue.



- The requested modification will be validated upon submittal and given an appropriate status.
- Since the validation of the e-Tag ID is performed when the transaction is submitted, the user should adjust the e-Tag ID prior to re-submitting the modified schedule.
- **NOTE:** A Pre-Approved transaction status will only occur when a corresponding "Implemented" e-Tag exists. EES recognizes that the timing of the e-Tag implementation may occur after the submittal of the transaction. Therefore, EES will continue to monitor the e-Tag status and will automatically update the status from Pending Action to Pre-Approved when the e-Tag is "Implemented", provided the revised profiles match.



## 6. Additional EES Features

### Saving an Energy Profile

Once an energy profile has been created, it may be saved for future use. To save a profile, you must use a newly created schedule and provide a unique profile name. The current energy profile, MWs over time for the selected day, will be saved to the database under the defined name. The profiles you create are specific to your username, and cannot be accessed by other users in your company.

#### To save a profile:

1. Create a new schedule providing MW information on any given day.
2. Before submitting or saving the new schedule, click the **Save myProfile** button located at the top-right of the calendar or single-day view in Scheduler.
  - You must currently have one of the following buttons highlighted: **Day Ahead**, **Real Time** or **Real Time/Price**
  - You must have just created the MW profile to be allowed to save the profile
  - You will not be allowed to select **Save myProfile** for a profile on a schedule that has been retrieved
3. In the Script Prompt dialog box that displays, type a name for this profile.
4. Click the **OK** button to save the profile to the database.
5. Complete the schedule, if desired.
6. To confirm that the profile has been saved: click the **Retrieve myProfile** button located at the top-right of the calendar or single-day view in the Scheduler. You should see the name of the newly created profile in the list.

## Retrieving an Energy Profile

When retrieving a profile, all profiles are viewed graphically. You can select a profile by clicking the radio button under the desired graph.

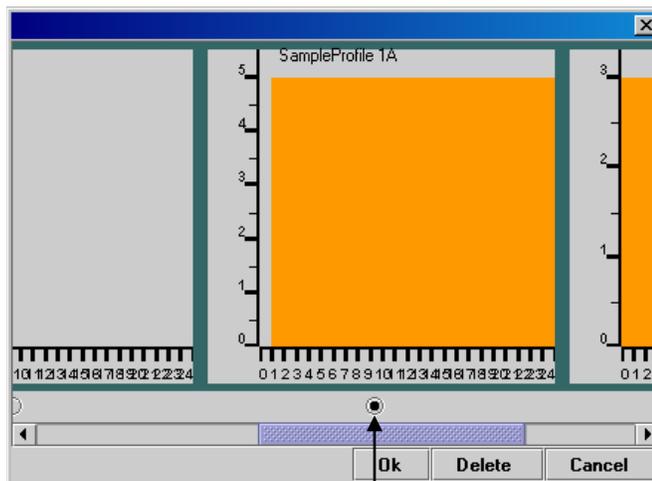
### To retrieve a profile:

1. In Scheduler—either a new schedule or a schedule to be modified—select the day or days for which you want to implement the profile.

To select multiple days in Calendar view, hold down the CTRL key and use the cursor to click the selected days. Selected days become highlighted.

To cancel a selection, click that day with the cursor again.

2. Click the **Retrieve myProfile** button located at the top of the calendar or single-day view in Scheduler.
3. Use the SCROLL BAR to view available profiles.
4. Select the desired profile by clicking the radio button located underneath that graphical representation.



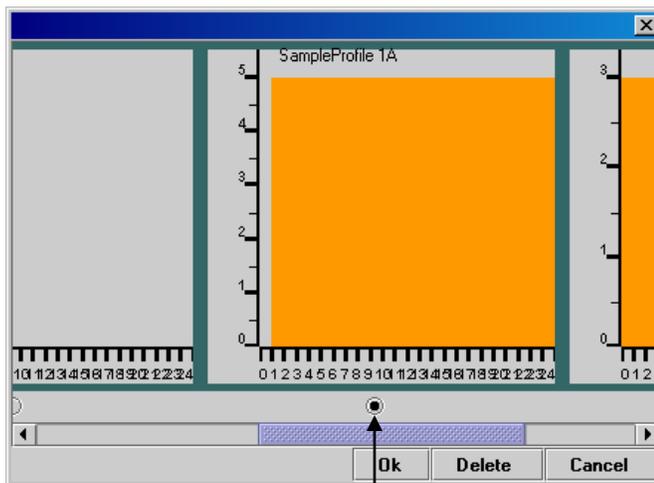
Profile selection radio button

5. Click the **OK** button to apply this profile to the selected day or days.
  - If you are retrieving the profile into a **Real Time/Price** transaction, you will be prompted for a price for every MW value in the profile.
6. Complete the energy schedule as desired.

## Deleting an Energy Profile

To delete a profile:

1. In Scheduler, click the **Retrieve myProfile** button located at the top of the calendar or single-day view in Scheduler.
2. Use the SCROLL BAR to view available profiles.
3. Select the profile that you want to delete by clicking the radio button located underneath that graphical representation.



Profile selection radio button

4. Click the **Delete** button to remove this profile from the database.

**WARNING:** You will not be warned or given a chance to change your mind before deleting this profile from the database; be very sure that you want to delete it before clicking the Delete button.

## Ramp Viewer

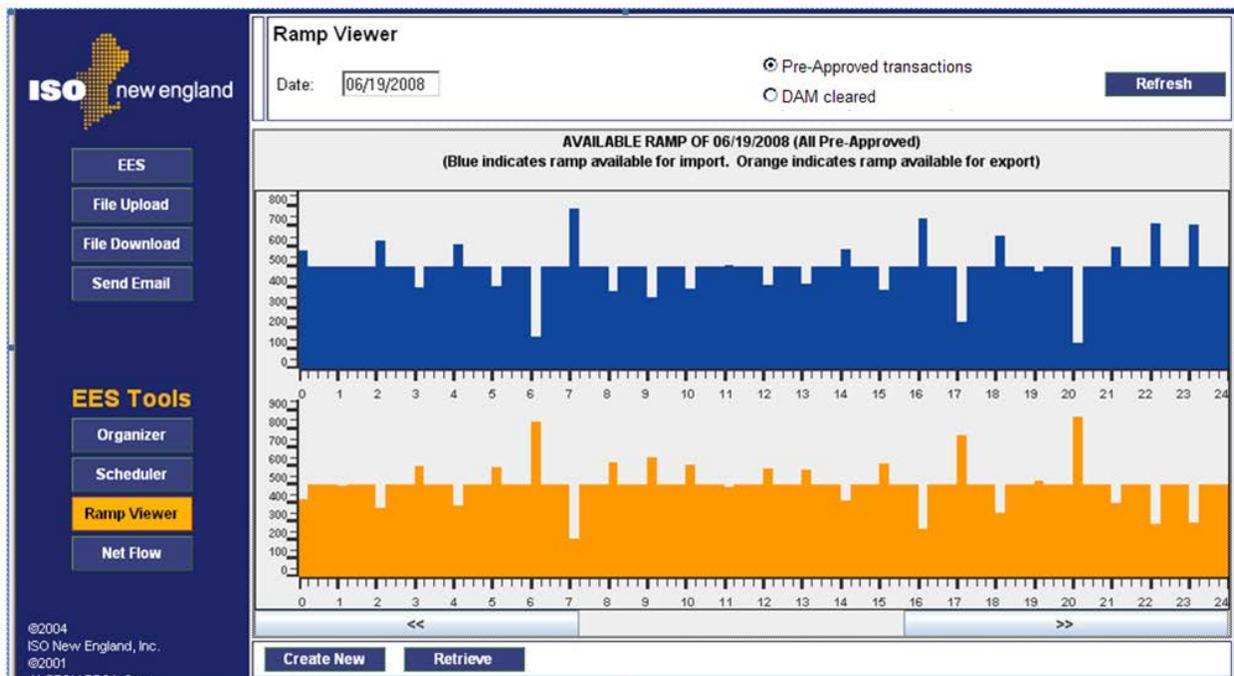
**Note:** ISO New England will not prevent a user from submitting transactions based on ramp values and will not deny submitted transactions based on ramping constraints. Ramp will be handled on an hour-by-hour basis by the Operations staff. As such, no messages will be presented to the user upon submittal of a transaction regarding ramp.

### To review currently available ramp:

The Ramp Viewer can be used to display available ramp for import or export for all hours on any selected day. Any time the date or direction are updated, you must click the Refresh button to update the display. It is important to remember that the data shown in the Ramp Viewer is based on all currently submitted transactions, and will change with every submitted transaction.

The radio buttons on the upper left allow the user to select what transactions to include in the ramp viewer display.

- Selecting "Pre-Approved Transactions" will include all transactions that have been submitted up to that point in time that have reached the Pre-Approved status.
- Selecting "DAM Cleared" will provide the user with those transactions that have cleared the ISO New England DAM and also have a Pre-Approved or Approved Real-time energy profile.



## Net Flow

This screen shows information that can be used to further understand the ramping capability in the coming hour(s). The information that continues to be shown in the Ramp Viewer is comparable to the data contained in the "All Approved Requests" column.

This screen provides additional information regarding the current flow on each interface and the magnitude of transactions that have been submitted since the day-before checkout. The sign convention is consistent with all other publications of net flow, Imports are negative, Exports are positive.

For example, the change in the New York values in the figure below shows that that 117 MW (822-705) of Exports have been submitted, reducing the total Import net interchange, since the day-before checkout occurred.

### Real Time Market Net Flow Information

Last Updated: 03/07/2013 12:06 PM

Refresh

|                | Current Hour<br>HE 13 | Next Hour<br>Preliminary<br>HE 14 | Future Hour<br>HE 15 |                          |
|----------------|-----------------------|-----------------------------------|----------------------|--------------------------|
|                |                       |                                   | DAM Cleared          | All Approved<br>Requests |
| Pool Wide      | -271                  | -266                              | -194                 | -331                     |
| NY Northern AC | 45                    | 40                                | 65                   | -20                      |
| Phase I/II     | -75                   | -75                               | 0                    | -75                      |
| Highgate       | -218                  | -218                              | -219                 | -219                     |
| New Brunswick  | -66                   | -56                               | -40                  | -60                      |
| NY CSC         | 0                     | 0                                 | 0                    | 0                        |
| NY NNC         | 43                    | 43                                | 0                    | 43                       |

Note:

- "N/A" indicates that the information for the next hour is not yet available
- MW values in "DAM Cleared" column represent those RT transactions that have cleared in the ISO-NE DayAhead Market
- MW values in "All Approved Requests" include all transactions submitted to-date for that interface.>
- "Last Updated" shows the last time the source data was updated; click "Refresh" to update data on the screen.

## File Download (Download RT Actuals)

This button is used by Market Participants to view the actual flow for scheduled external transactions. The downloaded file is in XML format as defined in the document "*EES Upload and Download File Format*" on the ISO New England web site.

### To Download Actual Data:

1. Click the **File Download** button on the left-hand side of the screen.
2. Select the desired start and stop date.
  - The stop date may not be past the current day
  - The start date may not be more than five days in the past
3. Click **Submit**
4. You will be prompted to save or open the file. The Save option should be selected.
5. You will then be prompted to enter the desired file name and location. Enter the name and click **Save**.



The screenshot shows a web browser window titled "Download RT Actuals - Windows Internet Explorer provided by ISO New England". The page content includes the heading "Download RT Actuals", a "start date:" label followed by three dropdown menus for month (Apr), day (15), and year (2010), and a "stop date:" label followed by three dropdown menus for month (Apr), day (15), and year (2010). Below the date fields is a blue "Submit" button.

## File Download (Download Submittals)

This button is used by Market Participants to view previously submitted transactions; both Day Ahead Market and Real-Time Market transactions may be retrieved. The downloaded file is in XML format as defined in the document "*EES Upload and Download File Format*" on the ISO New England web site.

### To Download Submitted Data:

1. Click the **Download Submittals** button on the left-hand side of the screen.
2. Select the desired start and stop date.
  - The stop date may not be past the current day
  - The start date may not be more than five days in the past
3. Select the desired transactions to be retrieved.
  - If DA is checked, the Day Ahead Market results will be provided if they are available
  - If RT is checked, the status of desired transactions must be selected
4. Click **Submit**
5. You will be prompted to save or open the file. The Save option should be selected.
6. You will then be prompted to enter the desired file name and location. Enter the name and click **Save**.

Download Submittals - Windows Internet Explorer provided by ISO New England

**Download Submittals**

DA (w/ Results if available)

RT Approved

start date: Apr 15 2010      stop date: Apr 15 2010



## 7. File Upload

Both Day Ahead and Real-Time Market schedules may be submitted via file upload. The format for these XML-based files is detailed in the document "*EES Upload and Download File Format*" on the ISO New England website.

### Validation

Uploaded XML files are subject to three sequential validation checks. If one schedule fails, the process continues until all schedules are processed. After all schedules in a file are processed, the results are displayed.

**XML format.** This first check validates file syntax, XML tags, and data elements. If any part of this validation check fails, the file upload is aborted and an XML Parse Error message details the line number where the error occurred.

**Data consistency.** The second check ensures that you did not submit a schedule with inconsistent data; for example, Start Date > Stop Date or negative MW value. When errors are encountered, the schedule is returned with a description of the error message. When this occurs, the schedule is not saved to the database and cannot be viewed from EES.

**Business-rule validation.** The final check validates the path, OASIS, and NERC tag association with an energy schedule.

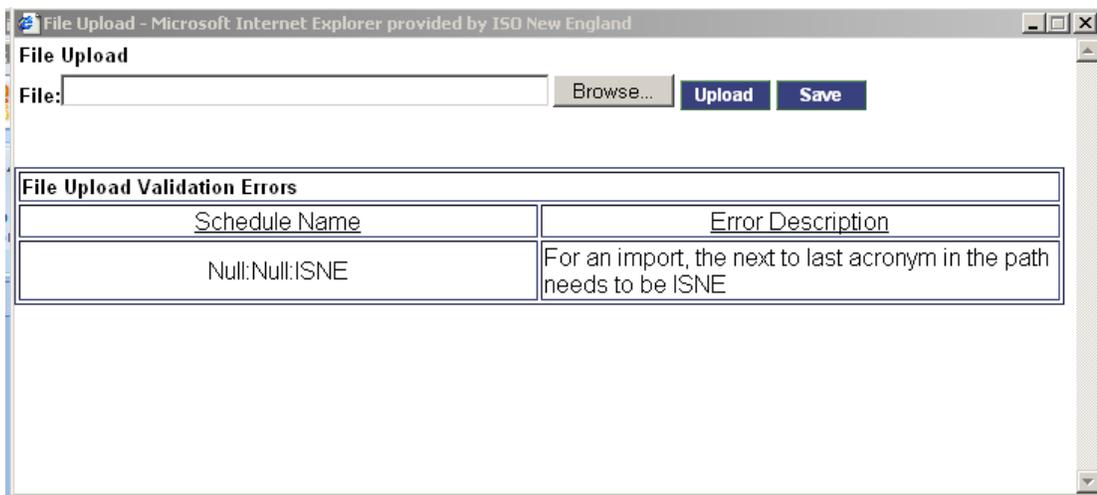
**Tip on Uploading Files:** Depending on the results of the validations, it is possible for some transactions in a file to be uploaded, while others are not. Utilizing a unique Schedule Name for every transaction will simplify review of the file upload results.

## Uploading Files

1. Click the **File Upload** button on the left-hand side of the screen.
  - You must be successfully logged on to EES to utilize the File Upload feature
  - You may click the **File Upload** button from anywhere within EES



2. Click the **Browse** button to select the location and name of the file to upload
3. To complete the file upload, click the **Upload** button located on the File Upload dialog.
4. You will then be prompted to confirm proceeding with the upload, click **OK** to continue.
5. After the file upload is complete, the results of the upload will be shown on the screen. Once this screen is closed, this information cannot be retrieved on the User Interface.



6. Click **Save Results** to save the results of the file upload to an XML-based file for later review.
7. You will be prompted to save or open the file. The Save option should be selected.
8. You will then be prompted to enter the desired file name and location. Enter the file name and click **Save**.



# **User Guide for External Transactions using EES**

## **— Reference Section —**

|                               |                       |
|-------------------------------|-----------------------|
| <b>Document Version:</b>      | <b>9.0</b>            |
| <b>Software Release Date:</b> | <b>September 2018</b> |
| <b>Posting Date:</b>          | <b>August 2018</b>    |



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# Preface

## Purpose

This Enhanced Energy Scheduling (EES) User Guide will serve as the reference document for the specific purpose of transacting business associated with External Transactions within the ISO New England (ISO) market place. This document introduces the functionality and the structure of the application and is one of two distinct documents. Both an EES Reference document and Task document are provided. This Reference document explains the general concepts for using the application. The Participant Task document goes into greater detail for specific tasks. In most instances, web page screen captures have been used to illustrate the explanations. The EES application is mapped to the SMD Market database.

On Coordinated Transaction Scheduling (CTS) Enabled Interfaces, Real-Time External Transactions must be submitted into the NYISO Joint Energy Scheduling System (JESS). Please see their website for the associated user guide.

## Assumptions

An assumption has been made that the reader is familiar with using web-based applications and web-browser navigation. The market system user should have a good understanding of ISO New England Market Rule 1, the Manuals and other governing documents in order to properly use the EES application to complete desired business transactions.

## Change Summary

| <b>Revision</b> | <b>Transmittal #</b> | <b>Date</b>   | <b>Comments</b>  |
|-----------------|----------------------|---------------|--|
| Draft           |                      | 21 April 2001 | First release  |
| 1.0             | None                 | 11/2002       | GHL  |
| 2.0             |                      | February 2004 | <ul style="list-style-type: none"> <li>• Updates made to reflect EES Version 2.5.5</li> <li>• Log-on screen updated to current version</li> <li>• Updated Organizer screen shot and description for new/deleted features</li> <li>• Updated SideLine Navigation screen shot and description for change in buttons</li> <li>• Updated Scheduler screen shot to reflect change in main menu buttons and new Special Exception Icon</li> <li>• Updated Ramp Viewer screen shots to reflect change in main menu buttons</li> <li>• Removed ATC Viewer description</li> <li>• Added Net Flow description</li> <li>• Screen captures, editorial and clarification changes made, as necessary</li> </ul>                |
| 3.0             |                      | November 2004 | <ul style="list-style-type: none"> <li>• Main objective of this release was to eliminate the dependence on Microsoft JVM. Sun Java is now utilized.</li> <li>• NRTG OASIS button converted to INTERFACE; information only required to be entered once for any transaction</li> <li>• External OASIS button title converted to OASIS</li> <li>• Special Exception user entry modified; separate comment now entered for each selected exception</li> <li>• User should be aware of corresponding File Upload format changes for above three items</li> <li>• Removal of Ramp validation upon submittal</li> <li>• Redesign of the Ramp Viewer</li> <li>• User can open ISO-NE Web Site from within EES</li> </ul> |
| 4.0             |                      | February 2005 | <ul style="list-style-type: none"> <li>• Change all references relating to NEPOOL to corresponding RTO terminology</li> </ul>  |
| 5.0             |                      | June 2008     | <ul style="list-style-type: none"> <li>• Change in look and feel of application to be consistent with corporate identify standards</li> </ul>  |

|     |  |                |  |
|-----|--|----------------|--|
| 6.0 |  | June 2010      | <ul style="list-style-type: none"> <li>• Updated for new File Upload/Download buttons</li> </ul>                           |
| 7.0 |  | May 2013       | <ul style="list-style-type: none"> <li>• Update timing categories for Ramp Viewer and Net Flow displays</li> </ul>         |
| 8.0 |  | December 2015  | <ul style="list-style-type: none"> <li>• Update to reflect implementation of Coordinated Transaction Scheduling</li> </ul> |
| 9.0 |  | September 2018 | <ul style="list-style-type: none"> <li>• Remove reference to valid prices</li> </ul>                                       |



# 1. Web Application Access

The EES application is accessed through Internet facilities with the following web browser:

- Internet Explorer 6.x or higher, supporting SSL 3.0 secured 128-bit encryption

Additional software and hardware requirements for accessing the ISO New England SMD marketplace are listed on the ISO-NE web page at: <http://www.iso-ne.com>

All users need to register with the Customer Service Department within ISO-NE in order to submit and view information in the EES application for the purpose of taking part in the ISO New England SMD Marketplace.

Registration for market system user access can be done by going to the registration area of the ISO New England web page. Once registered, market system users will be provided with the link to access the SMD home page, which will then allow direct access to SMD software applications.

Access to the SMD Sandbox will also be restricted to registered market system users and FTR bidders/holders. Questions or inquiries about market access should be addressed to the Customer Service Department at ISO New England.

## 2. EES User Interface

### Logon Screen

When on the SMD Applications Home Page, click on External Transactions. After selecting the External Transactions application and your certificate is validated, you will see the following screen in EES. If this is your first time using EES, select the **"Additional Hardware/Software Configuration"** button. When your browser is properly configured, click **"Enter EES"** to begin. At any time in the EES application, you may click the ISO New England logo to open a new window connecting you to the ISO New England Web Site.

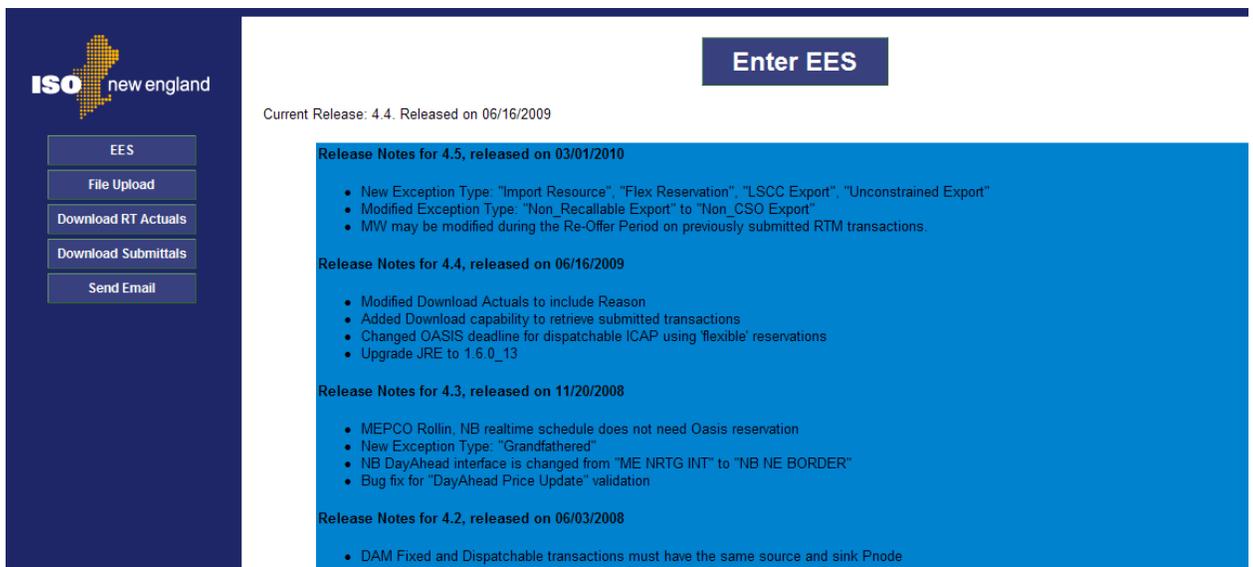


Figure 1. Main EES screen

## Schedule Organizer Page

When you enter the EES application, the default page is the Schedule Organizer Web page, where schedules and their status are viewed.

Schedule Organizer displays high-level information about schedules and allows you to perform certain actions on them, such as

- Filter the schedule display based on Schedule status
- Define the date range for those schedules that you want to view
- Sort schedules based on column headings
- Submit a schedule or multiple schedules that are in *Working* status.

The screenshot shows the Schedule Organizer interface. On the left is a dark blue sidebar with the ISO New England logo and navigation buttons: EES, File Upload (with an 'i' icon), Download RT Actuals, Download Submittals, Send Email, and EES Tools (Organizer, Scheduler, Ramp Viewer, Net Flow). The main content area is titled 'Schedule Organizer' and includes a 'Select date' section with 'From' and 'To' date pickers (both set to 07/13/2010), a 'Select status' section with checkboxes for Working, Approved, Pre-Approved, Pending Action, Submitted, and Day-Ahead, and buttons for Sort and Refresh. Below this is a table with columns: Co., D-A, R-T, ISO-NE ID, Schedule Na..., Tag Name, Outsid..., Start Date, End Date, Interface, Status, Flag, and Act... The table contains several rows of schedule data, with some rows having red question marks in the Flag column. At the bottom of the main area are 'Create New' and 'Retrieve' buttons. Callout letters a through j point to specific elements: 'j' to the sidebar, 'a' to the 'From' date field, 'b' to the 'To' date field, 'c' to the 'Select status' checkboxes, 'd' to the 'Sort' button, 'e' to the 'Refresh' button, 'f' to the 'Create New' button, 'g' to the 'Retrieve' button, and 'h' to the 'Act...' column header.

Figure 2. Schedule Organizer Web Page

- Select Date Block** – Contains the 'From' date and 'To' date used to select the transactions that will be viewed in the Schedule List.
- Schedule List** – Displays the list of schedules that meet the selected query parameters.
- Select Status Block** – Contains checkboxes to be selected as query parameters to define those schedules that display in the list.

- d. **Sort Button** – Launches the Sort dialog, in which sort criteria can be selected to define the way that schedules display in the Schedule List; sort can be ordered by three parameters.
- e. **Refresh Button** – Refreshes the Web page display when clicked; use this button after defining schedule query criteria to display results according to your selected parameters.
- f. **Create New Button** – Opens a blank Scheduler Web page, in which a new schedule can be created.
- g. **Retrieve Button** – Launches the Retrieve dialog box, in which a schedule ID can be typed; the retrieved schedule displays in the Scheduler Web page.
- h. **Column Headings** - The column headings from left to right are:
- **Comments:** Icon appears if Special Exception has been entered
  - **Day - Ahead:** Identifies type of Day-Ahead transaction.
  - **Real Time:** Identifies type of Real Time Transaction
  - **ISO-NE ID:** As assigned
  - **Schedule Name:** As entered
  - **Tag Name:** As entered
  - **Outside ID:** As entered
  - **Start Date:** Earliest start time of schedule
  - **End Date:** Latest end date of schedule
  - **OASIS:** As entered
  - **Status:** As validated
  - **Flag:** Lists any flags associated with the schedule
  - **Action Required:** Lists any warnings/errors associated with the schedule
- i. **Transaction Type** – Displays the type of Market transaction entered
- In the **D-A** column the type of Day Ahead Market transaction is identified as:
- F = Fixed
  - D = Dispatchable
  - U = Up-to congestion
- In the **R-T** column the type of Real-Time Market transaction is identified as:
- F = Fixed
  - D = Dispatchable
- j. **ISO-NE Logo** – Clicking here will open a new window connecting you to the ISO New England Web Site.

## SideLine Navigation Links Panel

The pane located at the left of the Organizer web page – containing the SideLine Navigation Links panel – is the main method for navigating the EES application web pages. This panel is visible and active on all EES web pages once the user is logged into EES.

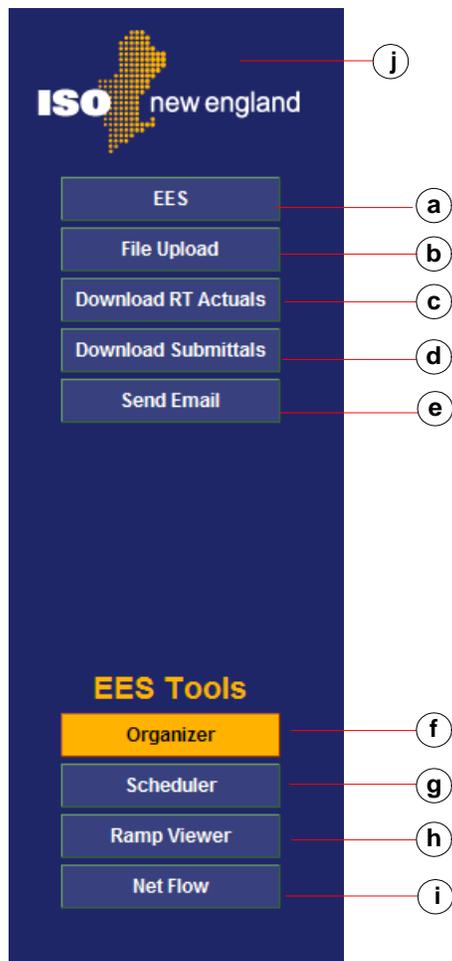


Figure 3. SideLine Navigation Links Panel

- a. **EES Logo** – displays server, configuration, and technical support information
- b. **File Upload Button** – launches the File Upload dialog, where you can select the file to be uploaded
- c. **Download RT Actuals Button** – launches a dialog where you can define the RT data to be downloaded
- d. **Download Submittals Button** – launches a dialog where you can define which previously submitted transactions you want to be downloaded
- e. **Send Email Button** – launches a new e-mail message with a predefined customer service address in the **To:** field
- f. **Schedule Organizer Page** – navigates to the Schedule Organizer page (the default page displayed at log on)
- g. **Scheduler Button** – navigates to the Scheduler page
- h. **Ramp Viewer Button** – navigates to the Ramp Viewer page
- i. **Net Flow Button** – navigates to the Real Time Market Net Flow information.
- j. **ISO-NE Logo** - opens new browser connecting to ISO New England Home Page

## Scheduler

Scheduler is the page where you identify all information regarding the desired schedule., including:

- desired market
- direction, path and associated interfaces
- energy schedule and any applicable price
- transmission information
- NERC e-Tag identifier

## Scheduler Web Page

The calendar view is the default view when the Scheduler is opened. The day highlighted in yellow indicates the day for which information will be entered. Details on navigating in the Calendar View are in a future section. This Calendar View can be alternated with the Single Day view by double-clicking any day within the calendar or by selecting the Single Day button in the upper right hand corner of the screen.

The screenshot shows the Scheduler web page interface. Callouts a through k point to the following elements:

- a**: Scheduler header
- b**: ISO-NE ID field
- c**: Schedule Name field
- d**: Outside ID field
- e**: Last Updated By field
- f**: Status field (circled in red)
- g**: Views section
- h**: Calendar button in Views
- i**: Save button (R/T Only)
- j**: Options button (R/T and D/A)
- k**: Submit button

The main interface includes:

- Scheduler** section with fields for ISO-NE ID, Schedule Name, Outside ID, User Name (Cheryl Mendrala), Last Updated By, and Status.
- Path Builder** section with a Direction dropdown (Import to ISNE) and a Path table with Start and Stop columns.
- Calendar** view for 10/30/2015, showing a grid of dates from Sunday 25 to Saturday 28. Friday 30 is highlighted in yellow.
- Views** sidebar with buttons for Single Day, Calendar, Day Ahead, Source/Sink, Real Time, Real Time/Price Interface, OASIS, and eTag ID.
- Edit** section with Start and Stop time pickers and an MW field.
- GraphIt** section with Start, Stop, and MW fields.
- MWh** field showing 0.0.
- Buttons** at the bottom: Save (R/T Only), Create New, Retrieve, Options (R/T and D/A), Clear, and Submit.

Figure 4. Scheduler Calendar View

- a. **ISO-NE ID Field** – Displays schedule ID (non-editable); this field is automatically populated when a new schedule is saved or submitted.
- b. **Direction Drop-down List** – Contains the list of all directions for moving energy:
  - Import to ISNE
  - Export from ISNE
  - Wheel through ISNE.
- c. **Path Drop-down List** – Contains the list of valid paths that can be associated with a schedule; this list is dynamic, depending on the Direction selected from the Direction drop-down list.
- d. **Last Updated By Field** – Displays the name of the person who created or last updated the schedule (non-editable).
- e. **Schedule Name Field** – Displays the name given to the schedule when it was created (non-editable).
- f. **Dynamic Icon Display** – Displays color key, two-settlement (DAM), and failed-verification icons.

| Icon  | Indicates   | Click to...                                  |
|---|---|--|
|  | The schedule failed validation                                    | View notes relative to why validation failed |
|  | Color key for status displays is available (see <b>Figure 5</b> ) | View the color-key palette and explanations  |
|  | This is a DAM schedule  | N/A  |
|  | There is a Special Exception linked to this schedule              | N/A  |

- g. **Edit Panel** – The buttons in this section will update the Notepad view (item k). Additional detail is provided for each of the buttons in this panel.
- h. **Views Panel** – The buttons in the panel alternate between the Single day view and the Calendar view, controlling what appears in the gray area in the center of the page.
- i. **R/T Only Button Group** – Contains buttons for accessing functions that are specific to real-time schedules.
  - Save - Used to save the current data on the Real-Time transaction
- j. **R/T and D/A Button Group** – Contains buttons for accessing functions that can be performed on both real-time and day-ahead schedules.

- Create New - Used to create a new transaction
  - Retrieve - Used to retrieve an existing transaction
  - Options - Used to enter Special Exceptions
  - Clear - Reverts to the last saved data on that transaction
  - Submit - Used to submit the transaction for validation
- k. **Energy Notepad Panel** – Contains the fields and drop-down lists for defining the schedule. The data in this panel will update with the button selected in the Edit panel.

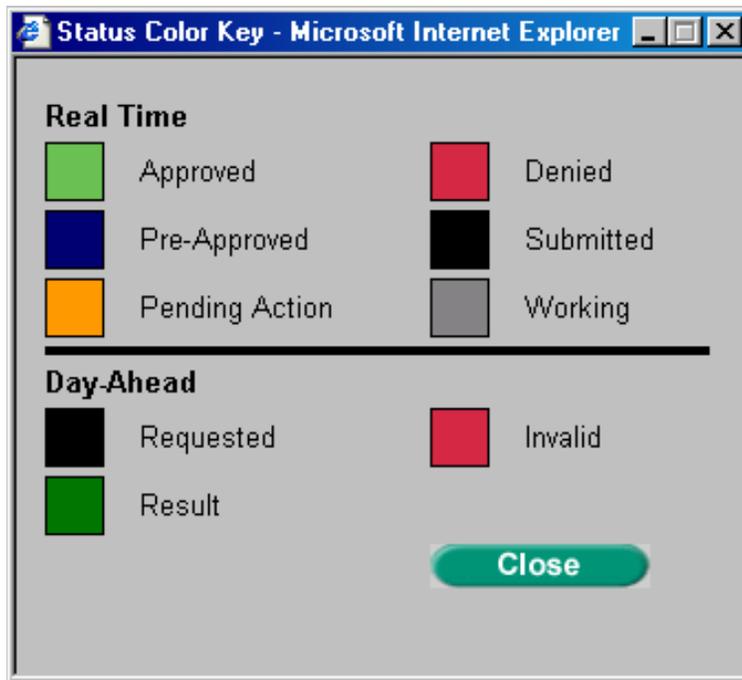


Figure 5. Color Key

## Calendar Navigation and Detail

This area of the Scheduler page displays the energy entered in the Notepad. The default is a calendar view, Figure 6, which displays a full month on the screen. The date(s) that is highlighted on the calendar is the date where the Notepad data will be entered.

A single day may be viewed, Figure 7, by double-clicking the desired date on the calendar, or highlighting the desired day and clicking the Single Day button on the upper right hand corner of the screen. The Calendar button in the upper right hand corner will revert the display back to the calendar view.

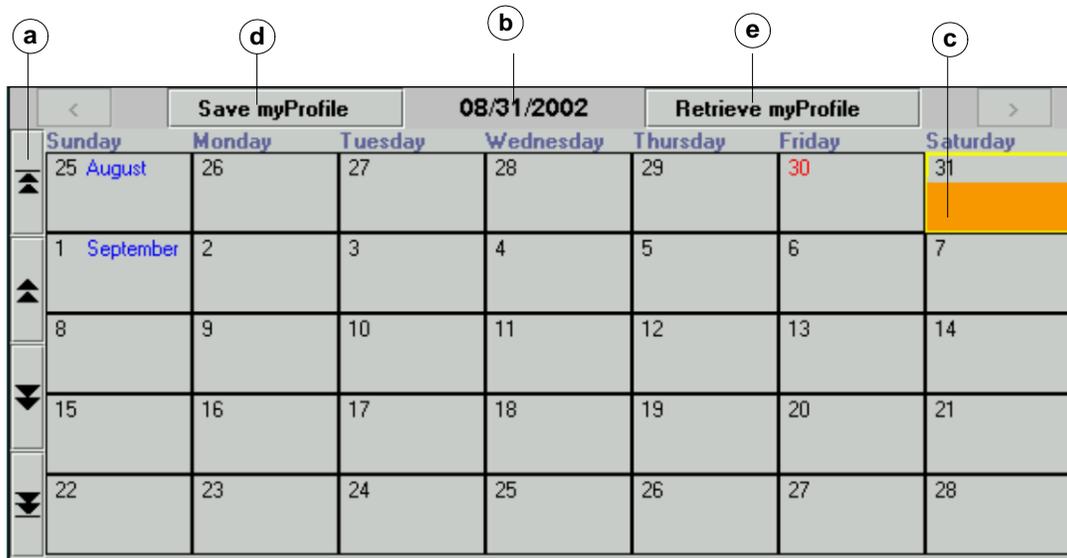


Figure 6. Calendar View Detail (Scheduler)

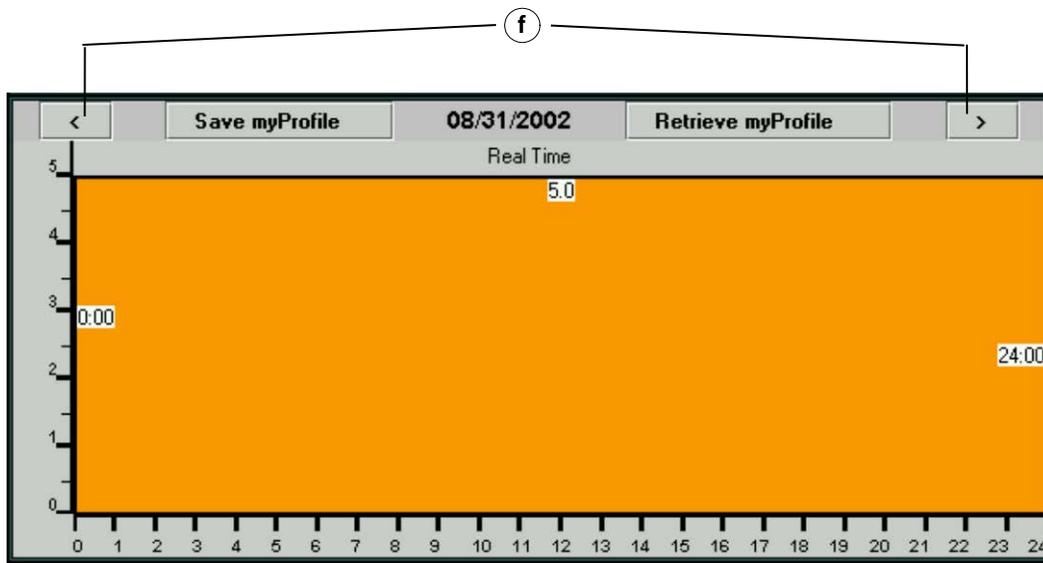


Figure 7. Single Day View Detail (Scheduler)

- a. **Calendar Navigation Arrows** – Displays different date views, according to arrow clicked; from top to bottom:
  - Back one month
  - Back one week
  - Forward one week
  - Forward one month.
- b. **Energy Reservation Display** – Displays color-coded indicator that energy is scheduled on that data.
- c. **Current Date Display** – Displays the current date in both calendar and single-page view.
- d. **Save myProfile Button** – Opens the dialog for naming and saving an energy profile.
- e. **Retrieve myProfile Button** – Opens the dialog for viewing and retrieving a saved energy profile.
- f. **Single-Day Directional Arrows** – Advances the single-day view one day in the corresponding direction (backward or forward)

#### **Calendar Tips**

- When creating a new profile, you can right-click the calendar day and select **Reset** from the floating menu that displays to set to zero the existing values.
- Make sure that the date selected for a new schedule is not a past date.
- To select multiple days, hold down the CTRL key and click the desired days with the cursor until all have been selected.

## Day Ahead Button

The Day Ahead button is selected to enter or modify an energy profile for the Day Ahead Market.

**Edit**

Day Ahead  
Source/Sink

---

Real Time  
Real Time/Price  
Interface  
OASIS

---

eTag ID

---

Start:

Stop:

MW:

Fixed  
 Congestion \$   
 Dispatchable \$

GraphIt

| Start | Stop | Type | MW | Price |
|-------|------|------|----|-------|
|       |      |      |    |       |

**Start** This is the starting hour of the schedule

**Stop** This is the ending hour of the schedule

**MW** This is the requested MW value of the schedule

**Type** One of the three radio buttons must be selected to define what type of Day Ahead schedule is desired. Fixed is the default.

**Price, \$** If Type = Congestion, this price represents the amount of congestion user is willing to pay.

If Type = Dispatchable, this price will be compared to the LMP at the applicable node.

**GraphIt** This button is selected to 'enter' the schedule. Once selected the energy schedule will appear as a line in the Notepad and on the graph to the left of the Notepad.

Notes:

- Start hour is the top of the hour the energy is scheduled to flow (Start Hour is not Hour Ending)

**Figure 8 Day Ahead Button**

## Source/Sink Button

The Source/Sink button provides additional detail regarding the origin and destination of the requested Day Ahead schedule. The population of these dropdowns is dependent on the selection of the Path. Depending on the direction, either the source interface (Source I/F) or the sink interface (Sink I/F) will be the ISNE PTF.

There are two sets of data requested on this Notepad. The Source and Sink Interface are used to define the interface to be used in the schedule. The Source and Sink define the pricing nodes associated with the schedule.

The screenshot shows a window titled "Edit" with a menu containing the following items: "Day Ahead", "Source/Sink" (highlighted in yellow), "Real Time", "Real Time/Price", "Interface", "OASIS", and "eTag ID". Below the menu are four dropdown menus with the following labels: "Source I/F:", "Sink I/F:", "Source :", and "Sink :".

- Source I/F** This defines the interface where the energy is entering the ISO New England system
- Sink I/F** This defines the interface where the energy is exiting the ISO New England system
- Source** This defines the source pricing node for the schedule (always the external node for an Import)
- Sink** This defines the sink pricing node for the schedule (always the external node for an Export)

### Notes:

- The selection of the source and sink pricing nodes has a direct impact on how the schedule is cleared and settled in the Day Ahead Market. Please refer to Manual 11 and 28 for additional information.

Figure 9 Source/Sink Button

## Real Time Button

The Real Time button is selected to enter or modify an energy profile for a Fixed transaction the Real Time Market.

**Edit**

Day Ahead  
Source/Sink

**Real Time**

Real Time/Price  
Interface  
OASIS

eTag ID

Start: 0    00

Stop: 24    00

MW:

**GraphIt**

| Start | Stop | MW |
|-------|------|----|
|       |      |    |

MWh: 0.0

- Start** This is the starting hour of the schedule
- Stop** This is the ending hour of the schedule
- MW** This is the MW value of the schedule
- GraphIt** This button is selected to 'enter' the schedule. Once selected the energy schedule will appear as a line in the Notepad and on the graph to the left of the Notepad.
- MWh** This is the total MW-hours associated with the requested schedule

### Notes:

- This button is used for Real Time Fixed transactions
- Start hour is the top of the hour the energy is scheduled to flow (Start Hour is not Hour Ending)

**Figure 10. Real-time Button**

## Real Time/Price Button

The Real Time with Price button is selected to enter or modify an energy profile for a Dispatchable transaction the Real Time Market.

**Edit**

Day Ahead  
Source/Sink

Real Time  
**Real Time/Price**  
Interface  
OASIS

eTag ID

Start: 0 00  
Stop: 24 00  
Min: 0  
Max:  
Price:

| GraphIt |      |     |     |       |
|---------|------|-----|-----|-------|
| Start   | Stop | Min | Max | Price |
|         |      |     |     |       |

MWh: 0.0

- Start** This is the starting hour of the schedule
- Stop** This is the ending hour of the schedule
- Max** This is the requested MW value of the schedule
- Price, \$** This price will be compared to the LMP at the applicable node.
- GraphIt** This button is selected to 'enter' the schedule. Once selected the energy schedule will appear as a line in the Notepad and on the graph to the left of the Notepad.
- MWh** This is the total MW-hours associated with the requested schedule

Notes:

- This button is used for Real Time Dispatchable transactions
- Start hour is the top of the hour the energy is scheduled to flow (Start Hour is not Hour Ending)

Figure 11 Real-Time with Price Button

## Interface Button

The Interface button is used to define the interface(s) associated with the requested schedule. The dropdown is populated based on selections made in the Direction and Path fields.

The screenshot shows a software interface for editing an interface button. It is titled "Edit" and contains several sections. The top section has a blue button labeled "Day Ahead" with "Source/Sink" written below it. The middle section has a blue button labeled "Real Time" with "Real Time/Price" written below it, and a yellow button labeled "Interface" with "OASIS" written below it. The bottom section has a blue button labeled "eTag ID". Below these buttons is a section titled "Interface:" containing a dropdown menu, two buttons labeled "Link" and "Remove", and a text input field labeled "Interface".

### **Interface**

The appropriate interface should be selected from the dropdown list. This list is propagated based on the selected Direction.

### **Link**

Click here once the desired interface is selected from the dropdown list. Once linked, the selected interface will appear in the notepad.

### **Remove**

If user wants to un-link the selected interface, highlight the interface shown in the notepad and click Remove.

**Note:** If User is creating a multi-day schedule, the Interface only needs to be assigned once during the creation of the schedule.

Figure 12. Interface Button

## OASIS Button

This OASIS reservation is mainly for those interfaces that require separate pre-arranged OASIS service. This OASIS reservation is not for reservations associated with other control areas. There are a limited number of pre-existing OASIS reservations on PTF interfaces that would also use this button to link their applicable reservation. If required, an external OASIS Id must be linked before the ISO will consider the transactions for scheduling in the Real-Time Energy Market..

**Res ID** Type in external reservation ID. Value must be numeric.

**Link** Click here once Reservation ID has been entered to link the ID with the schedule. Once linked, the external reservation ID will appear in the notepad.

**Remove** If user wants to un-link the selected external reservation ID, highlight the interface shown in the notepad and click Remove.

**Note:** If User is creating a multi-day schedule, the OASIS only needs to be assigned once during the creation of the schedule.

Figure 13 OASIS Button

## eTag ID Button

The e-Tag ID button is used to identify the e-Tag ID that has been created for this requested schedule. Only one e-Tag ID may be linked to a schedule. When user submits the transaction, EES will attempt to validate the entered e-Tag ID with the EES real-time schedule.

The screenshot shows a web interface for managing e-Tag IDs. It is divided into two main sections. The top section, titled "Edit", contains several buttons: "Day Ahead Source/Sink", "Real Time Real Time/Price Interface OASIS", and a yellow "eTag ID" button. The bottom section, titled "NERC Tag:", features a dropdown menu, "Link" and "Remove" buttons, and a text area labeled "Associated Nerc Tag".

**e Tag ID** User may type in the e-Tag ID or may select from list in dropdown. Dropdown list will be populated with all valid e-Tags for user's company from the eTag database.

**Link** Click here once e-Tag ID has been entered to link the Tag to the schedule. Once linked, the e-Tag ID will appear in the notepad.

**Remove** If user wants to un-link the selected e-Tag ID, highlight the interface associated e-Tag ID shown in the notepad and click Remove.

Figure 14 e Tag Button

## Ramp Viewer

User can view the ramp at any time while in EES. This data shown in the Ramp Viewer is based on all submitted transactions and is for information only. ISO New England will not prevent user from submitting transactions based on ramp values and will not deny submitted transactions based on ramping constraints. Ramp issues will be handled on an hour-by-hour basis by the Operations staff.

The Ramp Viewer can be used to display available ramp for import or export for all hours on any selected day. Any time the date or direction are updated, you must click the Refresh button to update the display. It is important to remember that the data shown in the Ramp Viewer is based on all currently submitted transactions, and will change with every submitted transaction.

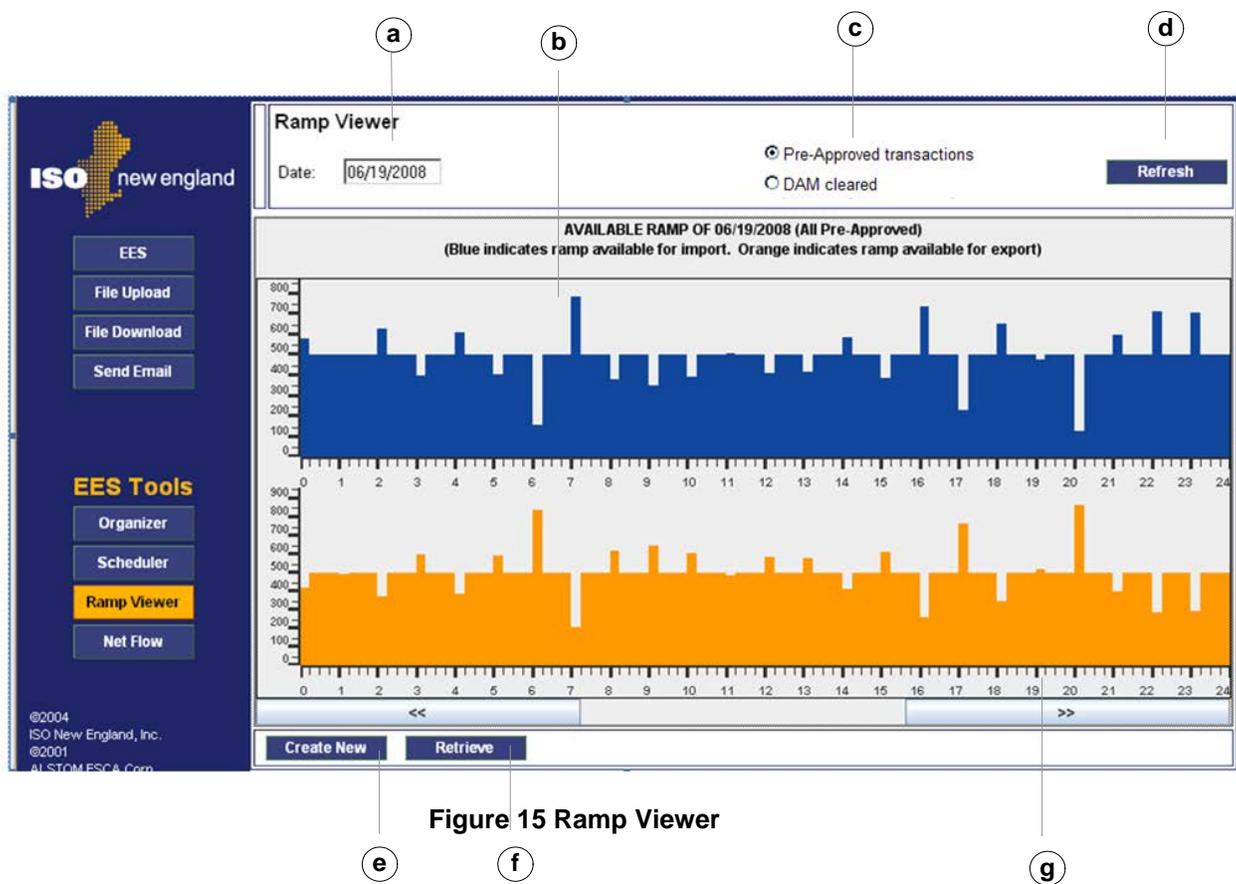


Figure 15 Ramp Viewer

The radio buttons on the upper left allow the user to select what transactions to include in the ramp viewer display.

- Selecting "All Pre-Approved Transactions" will include all transactions that have been submitted up to that point in time that have reached the Pre-Approved status.
- Selecting "DAM Cleared" will provide the user with those transactions that have cleared the ISO New England DAM and also have a Pre-Approved or Approved Real-time energy profile

Selecting the Scheduler button from this screen will return the user back to the most recently viewed schedule.

It should be noted that when the display shows a change in MW value over a 15-minute interval, that the duration of that MW value is actually one-hour.

- Date Field** – Accepts date for desired ramp view.
- Ramp Display** – This area displays the available ramp
- Transaction Selection** – Allows user to select which group of transactions to include in the Ramp Viewer display.
- Refresh** – This button must be clicked to update the ramp display when the date range or Transaction Selection is modified.
- Create New** – Allows user to create a new transaction.
- Retrieve** – Allows user to retrieve an existing transaction
- Arrows** – The arrows on the bottom of the page allow the user to scroll the ramp display day-by-day.

## Net Flow

This screen shows information that can be used to further understand the ramping capability in the coming hour(s). The information that continues to be shown in the Ramp Viewer is comparable to the data contained in the "All Approved Requests" column.

This screen provides additional information regarding the current flow on each interface and the magnitude of transactions that have been submitted since the day-before checkout. The sign convention is consistent with all other publications of net flow, Imports are negative, Exports are positive.

### Real Time Market Net Flow Information

Last Updated: 03/07/2013 12:06 PM

Refresh

|                | Current Hour<br>HE 13 | Next Hour<br>Preliminary<br>HE 14 | Future Hour<br>HE 15 |                          |
|----------------|-----------------------|-----------------------------------|----------------------|--------------------------|
|                |                       |                                   | DAM Cleared          | All Approved<br>Requests |
| Pool Wide      | -271                  | -266                              | -194                 | -331                     |
| NY Northern AC | 45                    | 40                                | 65                   | -20                      |
| Phase I/II     | -75                   | -75                               | 0                    | -75                      |
| Highgate       | -218                  | -218                              | -219                 | -219                     |
| New Brunswick  | -66                   | -56                               | -40                  | -60                      |
| NY CSC         | 0                     | 0                                 | 0                    | 0                        |
| NY NNC         | 43                    | 43                                | 0                    | 43                       |

Note:

- "N/A" indicates that the information for the next hour is not yet available
- MW values in "DAM Cleared" column represent those RT transactions that have cleared in the ISO-NE DayAhead Market
- MW values in "All Approved Requests" include all transactions submitted to-date for that interface.>
- "Last Updated" shows the last time the source data was updated; click "Refresh" to update data on the screen.

Figure 16 Net Flow