Joint Energy Scheduling System (JESS) Training

Specific for ISO New England Users

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Topics

• Using Enhanced Energy Scheduling (EES) vs. Joint Energy Scheduling System (JESS)

• Comparing New York and New England transaction concepts

• Introducing JESS contract and bid terminology
  – Contract vs. bid
  – Key information regarding contracts
  – Contract key data
  – Key information regarding bids
  – Bid key data

• Using JESS
Topics (continued)

• Comparing user actions today vs. tomorrow
  – User with only a ISO-NE certificate
  – Minimum actions required by ISO-NE market participant in JESS

• Locating CTS bid data

• Additional training available
Objectives

At the completion of this training, you will be able to:

• Recall the function of NY and NE systems (EES vs. JESS)
• Identify differences between NY and NE transaction concepts
• Distinguish between JESS contracts and bids
• Access and use JESS
• Recognize the functions and transactions that ISO-NE users can do in JESS
• State the functions and transactions that ISO-NE users must do in JESS
• Describe how ISO-NE users can acquire JESS data
Using EES vs. JESS
**When ISO-NE Users Need to Use EES vs. JESS**

<table>
<thead>
<tr>
<th>Interface</th>
<th>EES DAM</th>
<th>EES RTM</th>
<th>JESS DAM</th>
<th>JESS RTM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CSC</strong></td>
<td>ALL</td>
<td>ALL</td>
<td>not allowed</td>
<td>not allowed</td>
</tr>
<tr>
<td><strong>NNC</strong></td>
<td>ALL</td>
<td>ALL</td>
<td>not allowed</td>
<td>not allowed</td>
</tr>
</tbody>
</table>
| **NYN**    | ALL     | • Wheeling through ISO-NE  
               • Import Capacity Resource that is wheeling through NYISO | not allowed | ALL |

CSC = Cross Sound Cable  
NNC = Northport – Norwalk Harbor Cable  
NYN = New York Northern A/C
Comparing NY and NE Transaction Concepts
## Comparing NY and NE Transaction Concepts

<table>
<thead>
<tr>
<th>Concepts</th>
<th>New England</th>
<th>New York</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Terms</strong></td>
<td>EES references ‘transactions’</td>
<td>JESS references contracts and bids</td>
</tr>
<tr>
<td><strong>Transaction location</strong></td>
<td>RT transactions settle <strong>only</strong> at external nodes</td>
<td>Transaction type determines settlement location(s), which can include internal buses</td>
</tr>
</tbody>
</table>
| **Parties involved in transaction** | • All EES transactions involve only a single party  
• No confirmation required | • JESS contracts will involve NE Financially Responsible Parties (FRP) and can involve multiple NY FRPs  
• Confirmation by all parties required to before ‘valid’ |
Comparing NY and NE Transaction Concepts (continued)

<table>
<thead>
<tr>
<th>Concepts</th>
<th>New England</th>
<th>New York</th>
</tr>
</thead>
</table>
| *eTag ID references*    | • One ISO-NE ID to one eTag ID  
                          | • eTag ID cannot be reused                                                  | • Contract has unique ID  
                          |                           | • Contract can contain many bids  
                          |                           | • Each bid must have eTag ID  
                          |                           | • Same eTag ID can used on    |                           | multiple bids, but not on the  
                          |                           | same hour                   |                           | same hour                   |
| *DAM vs. RTM*           | DAM and RTM energy profiles are distinct and must be submitted separately  | • RTM bids are automatically created for bids that clear DAM and checkout with ISO-NE  
                          |                           |                           | - Unless a RTM bid has already been created for the same contract       |
## Comparing NY and NE Transaction Concepts (continued)

<table>
<thead>
<tr>
<th>Concepts</th>
<th>New England</th>
<th>New York</th>
</tr>
</thead>
<tbody>
<tr>
<td>What makes transaction unique</td>
<td>Uniqueness defined by eTag</td>
<td>Uniqueness defined by combination of Source/Sink/User Ref</td>
</tr>
<tr>
<td>Market deadline</td>
<td>60 minutes before start of hour</td>
<td>75 minutes before start of hour</td>
</tr>
<tr>
<td>Earliest submittal</td>
<td>10 days in future</td>
<td>62 days in future</td>
</tr>
</tbody>
</table>
| Bid data access                   | Transactions available in EES for years            | • Contract remains present in JESS so long as there are active bids submitted against it within 60 days  
                                            |                                                   | • Bids for specific date remain in JESS for 10 days       |
Questions
Introducing JESS Contract and Bid Terminology

- Contract vs. bid
- Key information regarding contracts
- Contract key data
- Key information regarding bids
- Bid key data
## Contract vs. Bid Comparison

<table>
<thead>
<tr>
<th>Contract</th>
<th>Bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent record</td>
<td>Child record</td>
</tr>
<tr>
<td>Data cannot change over time</td>
<td>Data can change over time</td>
</tr>
<tr>
<td>Must select transaction type</td>
<td>Must select schedule type</td>
</tr>
<tr>
<td>Does not identify energy market</td>
<td>Identifies market (DAM, RTM)</td>
</tr>
</tbody>
</table>
Key Information Regarding Contracts

- Must be created before any bid is created
  - Can exist without any associated bids
- Can be created by either NE FRP or NY FRP
- Must identify FRP from other area
- Remains active in JESS unless no bid is associated for 60 consecutive days
Contract Key Data

• **Transaction Type** selection determines valid source/sink options

• **Source/Sink** selection determines:
  – NYISO settlement behavior
  – NY FRP(s) that must confirm the future bids

<table>
<thead>
<tr>
<th>Transaction Type</th>
<th>Source/Sink List Contains</th>
</tr>
</thead>
<tbody>
<tr>
<td>External LBMP</td>
<td>• Proxy buses</td>
</tr>
<tr>
<td></td>
<td>• NY Reference Bus</td>
</tr>
<tr>
<td>External Bilateral</td>
<td>• Proxy buses</td>
</tr>
<tr>
<td></td>
<td>• NYCA internal buses</td>
</tr>
</tbody>
</table>

Note: If an ISO-NE user is creating a contract, be sure the source/sink are as desired by the NY FRP or the subsequent bids may **not** be confirmed.
Contract Key Data (continued)

• **NY FRP** (if created by ISO-NE User)  
  – Identifies NY company taking settlement obligation to all bids under the contract

• **User Ref** is a required user defined text field  
  – Combination of Source/Sink/User Ref **must** be unique

• **GIS ID** is an optional field  
  – Same as EES special exception = Generation Information System

• **Multi-Hour Block** flag defaults to N  
  – Relevant to DAM bids on the contract (specific to NYISO market)
Key Information Regarding Bids

• Must be created under an existing contract

• Financially Responsible Parties
  – Can be created or modified by either NE FRP or NY FRP
  – Creation or modification must be confirmed by other FRP
  – Deletion does not require confirmation by other FRP

• eTags
  – Each bid must have an eTag ID
  – eTag ID can be used on multiple bids, but not on the same hour
Key Information Regarding Bids (continued)

JESS autocreate of RT bids from DAM checkout

• Only NY FRP can submit to NY DAM in JESS

• NY FRP submitting NY DAM bid in JESS must identify NE FRP and RT bid price

• Day before checkout compares ISO-NE and NYISO DAM clearing on common eTag ID

• If day before checkout is successful, JESS RT bid is created by NYISO automated process
  – RT bid requires confirmation by ISO-NE FRP, which can be via a Trust Relationship
  – Confirmation status of RT bid is set based on any trust relationships in place upon DAM submittal
Bid Key Data

- **Bid Date** indicates the start time of the bid
- **Number of hours** indicates the number of hours for which the user would like to create the bid
  - Max is 360 (15 days)
- **Market** indicates which energy market bid will be submitted to
  - Hour Ahead Market (HAM) is only option available to ISO-NE user
  - NYISO user must be the FRP to create DAM bids
**Bid Key Data (continued)**

**Schedule Type** must be constant for all bids under a contract on NE CTS interface

<table>
<thead>
<tr>
<th>Schedule Type</th>
<th>What it Means on NYN CTS Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-Min LBMP</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Hourly LBMP</td>
<td>No change with CTS, evaluated hourly</td>
</tr>
<tr>
<td></td>
<td>Represents a NY wheel</td>
</tr>
<tr>
<td>15-Min CTS</td>
<td>Spread bid, evaluated every 15 minutes</td>
</tr>
<tr>
<td>Hourly CTS</td>
<td>Spread bid, evaluated hourly</td>
</tr>
<tr>
<td></td>
<td>Represents a NE wheel; must have EES transaction with same eTag ID</td>
</tr>
</tbody>
</table>
Bid Key Data (continued)

- **NERC Tag** indicates the eTag ID, from third party system, to be validated against this bid data

- **Bid Curve** provides price/MW pair for the selected time
  - 11 points are shown, only first point is allowed for NE CTS bids
  - Data can be constant over the hour
  - Data can vary on 15 minute basis
  - MW = 0 is allowed

- **Energy Profile** must be less than or equal to the bid curve MW

- **Default Curve** indicates which of the 15 minute interval bid curves shall be used if hourly scheduling is invoked in RTC
Questions
Establishing Access to JESS

- JESS can be accessed from either:
  - NYISO website
  - ISO-NE SMD Application Home page

- ISO-NE EES access provides comparable access to JESS
  - ISO-NE user digital certificate will provide access to JESS log-in page
  - Users are validated against user list provided by ISO-NE
Establishing Access to JESS

• Username/password required in addition to certificate
  – JESS determines “Username” based on digital certificate
  – Password must be created before initial log-in

• User has ability to manage password creation via NY process
  – Link provided on log-in page
  – User **must** have valid 10 digit phone number (no extension) in ISO-NE Customer Asset Management System (CAMS) to establish initial password
Initial Password Setup

Click here for initial password setup
You must have a 10 digit phone number in CAMS.
After entering verification code, you can setup your password.
CTS Confirmed Trust Relationships

• Trust Relationships allow auto-confirmation of all bids involving your company and the trusted company

• Every bid submitted or modified involving your company must be approved by your company to be valid
  – Without a Trust Relationship, a user of your company must take action to approve every submitted or modified bid
CTS Confirmed Trust Relationships, continued

• Trust Relationships are granted in a single direction
  – If Company A creates trust relationship with Company B
    • Bids submitted by Company B involving Company A are automatically approved
    • Bids submitted by Company A involving Company B are **not** automatically approved

• Trust Relationships are forward looking
  – Creating or removing a Trust Relationship will not impact the status of any existing bids
Select “Manage Trusts,” all organizations your company has Trust Relationships with will appear here.

- **To Add:** Select the desired company from dropdown list and click **Add**.
- **To Remove:** Select the **remove** button.

*These actions can be taken by any user with read/write access*.
Questions
Using JESS

Basic Navigation and Submittal
Using JESS

- Using contracts tab
- Using bids tab
- How to create a contract
- How to create a bid

- This section covers the *basics* of how to locate and create contracts and bids
- JESS User Guide provides more detail on these and other JESS features
- *Upload/Download Process Training is available on NYISO website*
Contracts tab is default JESS view

- Contracts tab may not be empty upon your initial entry into JESS
- NY FRP counterpart may have identified your company on existing contracts

Use Show/Hide Columns to customize columns presented on display
Contracts Tab, Filtering

Contracts have no timeframe associated with them

Any of these fields can be used to filter display
The following actions can be taken on contracts:

- Create bid – see Create Bid section
- View today’s bid – one step filter to view bids associated with contract
- Reassign – not applicable to ISO-NE users
- Delete – removes the contract from JESS
  - There is no ‘undelete’ action
  - Once a contract is deleted, it must be re-created
  - Contracts may have specific meaning to NYISO FRP
  - Coordinate with NYISO FRP before deleting a contract you did not create
Bids Tab, Viewing

Bids view defaults to today

*Separate row is presented for every hour of every contract*

Use **Show/Hide Columns** to customize columns presented on display.
Bids Tab, Viewing

Contract tab “ID” = Bid tab “Transaction ID”

Transaction ID = ID on **Contracts** tab
Bids Tab, Filtering

To find bids that require action by your company, from the **Search Bids** filter, select **Non-NY FRP = N**

Any of these fields can be used to filter display

Scroll to see additional filter options
Bids Tab, Actions

Only actions valid for that user and timeframe will be presented.

Action(s) can be taken on one record.

Action can be taken on multiple records at a time.
Viewing a Bid

View summary directly in **Bids** tab

Details presented depend on timeframe

Click on “+” or double click record
Viewing a Bid, with More Detail

Open bid to view more detail

Click View Bid to see more detail
Create a Contract

Select Create Contract on Contracts tab

Enter all details, click Save

Note: Selected Transaction Type, Source, Sink may have implications to the NYISO FRP
Create a Bid, from Bids Tab

Selecting **Create Bid** from **Bids** tab will open the *Create Contract* form described earlier

- Contract must exist before bids can be created
Create a Bid, Under Existing Contract

Select **Create Bid** from Actions(s) on any existing contract in **Contracts** tab.
Create a Bid, Copy Existing Bid

Select **Clone Bid** from Action(s) on any existing bid in **Bids** tab to copy existing bid and modify data.
Create a Bid

- **Bid Date** → Start date/time of the bid
- **Num Hours** → duration of bid
  - Example for peak hours: Bid Date = 9/18/2015 07:00, Num Hours = 16
- **Market** → HAM is only option for ISO-NE user

- **Schedule Type** =
  15 Min CTS, Hourly LBMP, Hourly CTS
- **NERC Tag** can be used on multiple bids, but not for same hour
Create a Bid

- MW and Price can be constant for all intervals of the hour
- MW and/or Price can vary for each 15 minute interval of the hour
- Must identify one interval as default for use when 15 minute scheduling is disabled
Modify a Bid

- All data on bid can be modified prior to market deadline
- Modifying data for any bid requires re-confirmation by counterparty

Select **View Bid** from Action(s) on any existing bid in **Bids** tab open and modify data
Comparing User Actions
Today vs. Tomorrow

- Minimum actions required by ISO-NE market participant in JESS
### Actions Required Today vs. Tomorrow

<table>
<thead>
<tr>
<th>Task</th>
<th>Today</th>
<th>Tomorrow</th>
</tr>
</thead>
<tbody>
<tr>
<td>eTag</td>
<td>NE or NY FRP create eTag</td>
<td>no change</td>
</tr>
<tr>
<td>DA NY</td>
<td>NY FRP submit in JESS</td>
<td>no change</td>
</tr>
<tr>
<td>DA NE</td>
<td>NE FRP submit in EES</td>
<td>no change</td>
</tr>
<tr>
<td>RT NY</td>
<td>NY FRP submit in JESS</td>
<td>NY FRP, no change</td>
</tr>
<tr>
<td>RT NE</td>
<td>NE FRP submit in EES</td>
<td>NE FRP confirms*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NE FRP confirm in JESS*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NE FRP submits in JESS</td>
</tr>
</tbody>
</table>

*Confirmation can occur through one-time setup of Trust Relationship
ISO-NE Market Participant – Minimum Actions Required

The minimum actions required by an ISO-NE market participant in JESS are:

1. Identify the NY FRP with which you do business
2. Log-in to JESS
3. Establish a **Trust Relationship** with appropriate NY FRP
   - Any transactions created, modified, or deleted by the NY FRP is automatically approved by the ISO-NE FRP in that trust relationship
Locating CTS Bid Data
Where to Find CTS Bid Data

• ISO-NE FRPs can view their CTS interface bid, and cleared data, directly in JESS
  – Data will be available in JESS for 10 days
  – Data can be downloaded from JESS

• ISO-NE will not duplicate the JESS bid data in EES

• ISO-NE FRPs can locate scheduled MWs in their settlement reports
  – Changes to ISO-NE settlement reports will be covered in ISO-NE CTS training
Additional Training Available
Additional Training Available

- NY CTS Training (Summer of 2015)
- ISO-NE CTS Training (Fall of 2015)
- JESS training material available on NYISO website:
  - JESS Enhancements - CTS Bidding
  - Joint Energy Scheduling System (JESS) Training
    - Information about the JESS Upload/Download process and template changes is included
- JESS User Guide for CTS
Questions
Customer Support Information

**Ask ISO** (preferred)
- Self-service interface for submitting inquiries
- Accessible through the SMD Applications Homepage
- Requires a valid digital certificate with the role of Ask ISO/External User (Contact your security administrator for assistance)

<table>
<thead>
<tr>
<th>Other Methods of Contacting Customer Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
</tr>
<tr>
<td>Email</td>
</tr>
<tr>
<td>Phone*</td>
</tr>
<tr>
<td>Pager (emergency inquiries)</td>
</tr>
</tbody>
</table>

* Recorded/monitored conversations
Evaluations