

CTS-New England Overview

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Training Topics

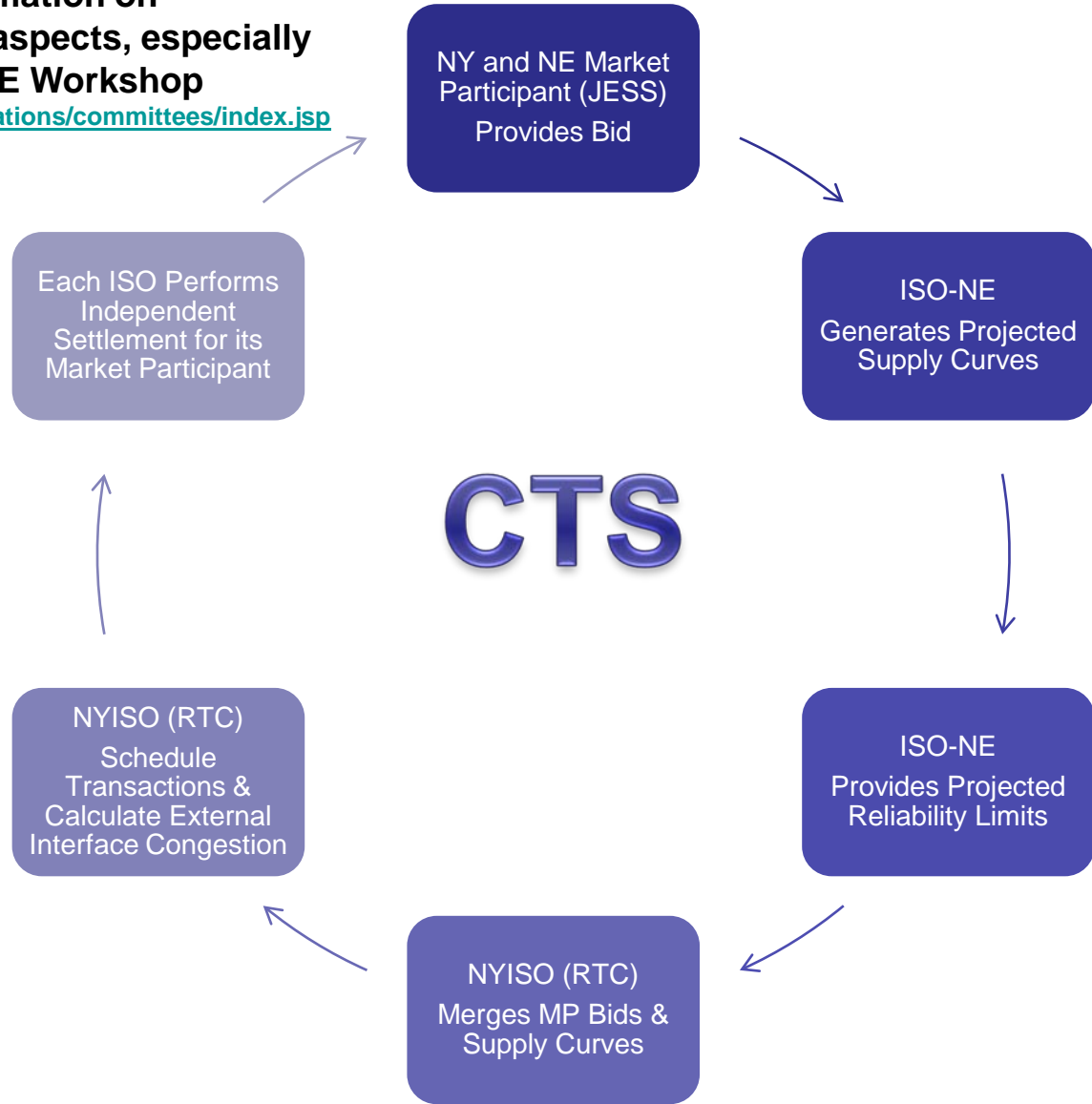
- ◆ CTS Overview
- ◆ Contracts vs Bids
 - *Contracts*
 - *Submitting CTS Interface Bids in JESS*
 - *Confirmations and Trust Relationships*
 - *Evaluation of CTS Interface Bids by the Market*
- ◆ Capacity considerations
- ◆ Settlement
- ◆ Upload/Download changes
- ◆ Sandbox testing information
- ◆ Informational Resources

CTS-NE Overview



See January-March 2015 Market Issues Working Group meetings for more information on reliability/congestion/capacity aspects, especially the 2/12/2015 MIWG CTS-ISO-NE Workshop

http://www.nyiso.com/public/markets_operations/committees/index.jsp



CTS-NE Overview

- ◆ **Only at the Sandy Pond Proxy (NY's proxy bus with ISO-NE)**
- ◆ **Transaction Bids**
 - *15-min Transaction bids will require CTS Interface Bids (i.e., "15-Min CTS" bids)*
 - *Wheel-Through Transactions through New England beginning or ending at the Sandy Pond Proxy (e.g. New Brunswick > ISO-NE > NYISO) require CTS hourly offers only*
 - *CTS bids (Hourly & 15-Min) are restricted to single-point bid curves*
 - *Wheel-Through Transactions through NY (e.g., OH > NYISO > ISO-NE), will require Hourly offers ("Decremental Bids") as before; there is no change ! i.e., bid against sink minus source congestion*



CTS-NE Overview

◆ Day-Ahead Market Transactions

- *For NYISO MPs, all DAM (and RT) transaction offers will be entered into the Joint Energy Scheduling System (JESS)*
 - The same process as is used today.

- *For ISO-NE MPs, all DAM transaction offers will be entered into ISO-NE EES*
 - The same process as is used today.



Common Bid Platform—JESS

- ◆ **RT Market Transactions: the Joint Energy Scheduling System (JESS) will now be the common (NY/NE MPs) bid platform *at the CTS enabled proxy bus with ISO-NE***
 - ***Instead of submitting separate bids to NYISO and ISO-NE, MPs will enter a single bid in JESS via:***
 - Web based user interface (covered by this presentation)
 - Upload/Download file transfers



SHORT REVIEW OF CONTRACTS VS BIDS



Contracts

vs

Bids

Creating a <u>Contract</u>: “Transaction Type” choices are either:	Drop-Down <u>Source</u>	Drop-Down <u>Sink</u>	“Schedule Type” Drop-Down <u>Bid</u> types
<u>External LBMP</u> (import/export)	Proxies and NYISO Reference Bus	Proxies and NYISO Reference Bus	15-Min CTS Hourly LBMP Hourly CTS
<u>External Bilateral</u> (import/export)	Proxies and NYCA Gens	Proxies and NYCA Load Buses	15-Min CTS Hourly LBMP Hourly CTS



CONTRACTS



Contracts Dashboard

- ◆ Shows user list of existing contracts associated with their organization
- ◆ Additional fields the user can display using “Show/Hide Columns” button
 - *NYISO FRP (Financially Responsible Party for NYISO settlement)*
 - *Non-NYISO FRP (Financially Responsible Party for ISO-NE settlement)*
 - *GIS Identifier-optional*
- ◆ Ability to search for contracts

Contracts Dashboard

Logged in as: DEMO USER Manage Trusts Upload/Download Visit Marketplace Logout

Joint Energy Scheduling System

Contracts **Bids**

Contract Search Results (31) Create Contract Show/Hide Columns

ID	Source	Sink	User Ref	Non-NYISO FRP	GIS ID	Assigned Contact User	Action(s)
100002	NIAGARA____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
100003	NIAGARA____	NE_LOAD_SANDY PD	Sample User Ref	ISONE Org 4	GIS4	Sample User	Action(s)
100004	NIAGARA____	NE_LOAD_SANDY PD	Sample User Ref	ISONE Org 5	GIS5	Sample User	Action(s)
100005	ST LAWRENCE____	NE_LOAD_SANDY PD	Sample User Ref	ISONE Org 6	GIS6	Sample User	Action(s)
100006	ST LAWRENCE____	NE_LOAD_SANDY PD	Sample User Ref	ISONE Org 7	GIS7	Sample User	Action(s)
100007	ST LAWRENCE____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
100008	ST LAWRENCE____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
100009	NIAGARA____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
1000010	NIAGARA____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
1000011	NIAGARA____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
1000012	NIAGARA____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
1000013	ST LAWRENCE____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
1000014	ST LAWRENCE____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
1000015	ST LAWRENCE____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)
1000016	NIAGARA____	PJM_LOAD_KEYSTONE	Sample User Ref			Sample User	Action(s)

Search Contracts

Transaction ID:

Transaction Type:

Source:

Sink:

User Ref:

Actions for Selected:

Page 1 of 2 | Displaying 1 - 25 of 31

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Contract Actions

- ◆ Create new contract
 - *May be done by either NY or NE FRP*

- ◆ *For an existing contract:*
 - *Create bid for this contract*
 - *View current day bids for this contract*
 - *Delete contract*
 - *Reassign (NYISO users only)*

Contract Actions

Logged in as: Testuser Bravo (22222) Manage Trusts Upload/Download Visit Marketplace Logout

Joint Energy Scheduling System 

Contracts **Bids**

Contract Search Results (8) Create Contract Show/Hide Columns

ID	Source	Sink	User Ref	Action(s)
1000001	NYISO_LBMP_REFERENCE	NE_LOAD_SANDY PD	FAKE_USER	Action(s) ▾
1000002	N.E._GEN_SANDY PD	NYISO_LBMP_REFERENCE	FAKE_USER	Action(s) ▾
1000003	N.E._GEN_SANDY PD	NYISO_LBMP_REFERENCE	FAKE_USER	Action(s) ▾
1000004	N.E._GEN_SANDY PD	NYISO_LBMP_REFERENCE	FAKE_USER	Action(s) ▾
1000005	HQ_GEN_CEDARS_PROXY	NE_LOAD_SANDY PD	FAKE_USER	Action(s) ▾
1000006	HQ_GEN_WHEEL	NE_LOAD_SANDY PD	FAKE_USER	Action(s) ▾
1000007	N.E._GEN_SANDY PD	NYISO_LBMP_REFERENCE	FAKE_USER	Action(s) ▾
1000008	N.E._GEN_SANDY PD	NYISO_LBMP_REFERENCE	FAKE_USER	Action(s) ▾

- Action(s) ▾
- Create Bid
- View Today's Bids
- Delete
- Reassign
- Update
- Action(s) ▾

Create Contract

Search Contracts

Transaction ID:

Transaction Type:

Source:

Sink:

User Ref:

Actions for Selected: Page 1 of 1 | Displaying 1 - 8 of 8

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Create Contract

- ◆ To create a new contract a NYISO user must specify the following:
 - **Source; select bus name from drop down**
 - **Sink; select bus name from drop down**
 - **User Ref; free text entry field**
 - **Non-NYISO FRP; select org name from drop down**
 - **GIS ID (Optional);** Allows user to type in identifier used in the New England Power Pool Generation Information System (NEPOOL GIS)

- ◆ Transaction Type drop down
 - **User selects “LBMP” or “Bilateral.” When “LBMP” is selected source and sink drop down selections limited to proxy buses and NY Reference Bus only**

Update Existing Contract at CTS-NE Proxy

- ◆ **An existing contract at a CTS Enabled Proxy Bus with ISO-NE must be updated to include the Non-NYISO Organization (FRP) prior to submitting bids**
 - *The Non-NYISO Organization for the contract cannot be changed*
 - *GIS ID can also be added, but not changed*
 - *To update contract: go to the Contracts tab in the JESS UI and select the “Update” options in the actions drop down box*



BIDS



Bid Curves at CTS-NE Proxy- *Day-Ahead Market*

- ◆ **All DAM bids will continue to allow for an up to 11 point (price-quantity pair) bid curve.**
- ◆ **There is no change in the Day-Ahead Market.**



Bid Curves at CTS-NE Proxy- *Real-Time Market*

- ◆ **Both ‘15-Min CTS’ and ‘Hourly CTS’ type bids will be restricted to a single point bid “curve”**
- ◆ **‘15-Min CTS’ type bids will have option to specify different (single point) bid “curves” for each quarter hour in RT**



Bid Type Option at CTS-NE Proxy: NY Wheels & NE Wheels

- ◆ **‘Hourly LBMP’ imports/exports will no longer be allowed once CTS is activated**
 - *Transactions wheeling through NYCA sourcing or sinking at the CTS-NE proxy will continue to use ‘Hourly LBMP’ bid type*

- ◆ **‘Hourly CTS’ bid type must be used to schedule imports/exports to NYISO associated with a wheel through ISO-NE**
 - *Bid validation will confirm via NERC e-Tag information specified in bid*

Create Bid

- ◆ Following creation of a transaction Contract a transaction Bid can be created.
- ◆ To create a Bid, the user specifies:
 - *Bid Date/hour; date and hour for bid*
 - *Num Hours; number of hours to create bid for*
 - *Schedule Type; 15-min CTS/Hourly CTS/Hourly LBMP (Import-Export/NE Wheel/NY Wheel)*
 - *NERC tag*
 - *Energy Profile MW (Bids must be \geq this value !)*
 - *Bid Curve; price/MW quantity pair(s)*
 - Option to specify individual bid curves for each quarter hour (see next slide)

Create Bid

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Joint Energy Scheduling System

[Dashboard](#) > [Bidding](#)

Contract Details

New Contract created

Transaction ID: 10000009

Your Organization is a Financially Responsible Party ("FRP") for this Contract.

Source: NYISO_LBMP_REFERENCE

Sink: NE_LOAD_SANDY PD

User Reference: FAKE_USER

Multi-Hour Block Transaction: No

NYISO FRP: (9999) Fake New York Org

Non-NYISO FRP: (0000) Fake ISONE Org

GIS: 123456789ABCDEFGHIJKLMNPOQRSTUVWXYZ

New Bid

In Progress

Bid Date:
Num Hours:
Market:
Schedule Type:
NERC Tag:
SCA: **PSE:** **Unique Num:** **RCA:**

Curve Time Frame: n/a

Energy Profile MW:

Point	1	2	3	4	5	6	7	8	9	10	11
MW	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
\$ Price: <input <="" input="" type="button" value="?"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>



Create Bid -15-minute Bid Curves

Joint Energy Scheduling System
 Dashboard > Bidding

Bid Date: 07/08/2015 00:00 EDT

Num Hours: 1

Market: HAM

Schedule Type: 15-Min CTS

NERC Tag: SCA PSE Unique Num RCA

Curve Time Frame: 00:00 - 00:14 **Energy Profile MW:** 10

Point	1	2	3	4	5	6	7
MW	10						
\$ Price	5						

use single curve: default curve:

Curve Time Frame: 00:15 - 00:29 **Energy Profile MW:** 12

Point	1	2	3	4	5	6	7
MW	12						
\$ Price	8						

default curve:

Curve Time Frame: 00:30 - 00:44 **Energy Profile MW:** 15

Point	1	2	3	4	5	6	7
MW	15						
\$ Price	20						

default curve:

Curve Time Frame: 00:45 - 00:59 **Energy Profile MW:** 8

Point	1	2	3	4	5	6	7
MW	8						
\$ Price	14						

default curve:



Create Bid –Results Window

- ◆ After successfully submitting a bid the user is presented with a window indicating that the bid has successfully been created
- ◆ Window provides links allowing user to return to dashboard or make an edit to the bid



Create Bid –Error Messages

- ◆ When a bid submission violates a bid validation rule no bid is created
- ◆ User is presented with a window displaying an error message indicating why the bid failed validation
- ◆ After closing message window the user may revise the bid and re-submit



Create Bid -Error Message

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Joint Energy Scheduling System

[Dashboard](#) > Bidding

Contract Details *New Contract created*

Transaction ID: 10000009 Your Organization is a Financially Responsible Party ("FRP") for this Contract.

Source: NYISO_LBMP_REFERENCE Sink: NE_LOAD_SANDY PD
 User Reference: FAKE_USER Multi-Hour Block Transaction: No
 NYISO FRP: (9999) Fake New York Org
 Non-NYISO FRP: (0000) Fake ISONE Org
 GIS: 123456789ABCDEFGHIJKLMNQRSTUUVWXYZ

New Bid *In Progress*

Invalid Submission ✕

JESS-10135 ERROR: First MW and \$/MW values on Transaction Bid Curve 1 must contain data. Error occurred on Curve 1. Generator N.E._GEN_SANDY PD, ptid = 24062 and Bus NYISO_LBMP_REFERENCE, ptid = 24008 for 03/14/2015 13:00 EDT.

Bid Date: RCA

Curve Time Frame: n/a Energy Profile MW:

Point	1	2	3	4	5	6	7	8	9	10	11
MW	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
\$ Price: <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

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Bids Dashboard

- ◆ Shows user list of current day bids (default)
- ◆ User can configure search parameters
- ◆ New fields the user can display using “Show/Hide Columns” button
 - *NYISO FRP*
 - *Non-NYISO FRP*
 - *User Ref*

Bids Dashboard

Logged in as: Testuser Bravo (22222) Manage Trusts Upload/Download Visit Marketplace Logout

Joint Energy Scheduling System

Contracts **Bids**

Bid Search Results (84) Create Bid Show/Hide Columns

Transaction...	Date HR	Market	Source	Sink	Bid Status	Confirmations				Action(s)
						NYIS...	Non-...	Buyer	Seller	
1000009	03/04/2015 12:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 13:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 14:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 15:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	VALIDATIO...	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 16:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 17:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 18:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 19:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 20:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)
1000009	03/04/2015 21:00 EST	HAM	N.E._GEN_SANDY PD	NYISO_LBMP_REF...	EVALUATING	Y	Y	Y	Y	Action(s)

Search Bids

Start Date: *
03/04/2015 00:00 EST

End Date:
03/13/2015 23:00 EDT

Bid Schedule Type:
None Selected

NERC Tag:
SCA PSE Unique # RCA

Contract Filters

Transaction ID:

User Ref:

Transaction Type:
None Selected

Source:
None Selected

Sink:

reset search

Actions for Selected: Delete Confirm Unconfirm Page 1 of 2 Displaying 1 - 50 of 84

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BID CONFIRMATIONS/TRUST RELATIONSHIPS



New Fields on the Transaction Contract

- ◆ **NYISO Organization**

- *Identifies NYISO MP responsible for the contract*
- *Allows ISO-NE MP to specify NYISO MP who is counterparty to the transaction*

- ◆ **Non-NYISO Organization**

- *Identifies ISO-NE MP responsible for the contract*
- *Allows NYISO MP to specify ISO-NE MP who is counterparty to the transaction*

- ◆ **All transactions at CTS Enabled External Proxy Bus with ISO-NE must identify both organizations**

- *DAM & RT bids*
- *CTS & LBMP bid schedule types*



Transaction Bid - Submission at NE CTS Enabled External Proxy Bus

- ◆ **RT market bid can be entered by either NYISO MP or ISO-NE MP**
 - *DAM bids will continue to be submitted separately in each ISO market*

- ◆ **In order to pass bid validation, RT market bid must be confirmed by both the NYISO MP and the ISO-NE MP**
 - *Applies to all RT market CTS Interface Bids*
 - *Confirmation can be performed manually, or*
 - *CTS Confirmed Trust Relationships can be established to automate the confirmation process (see next slide)*



CTS Confirmed Trust Relationships

- ◆ **A NYISO MP can extend a CTS Trust Relationship to an ISO-NE MP**
 - *When this ISO-NE MP submits a bid with the NYISO MP as the counterparty, the NYISO FRP confirmation status will automatically be set to ‘Y’*

- ◆ **An ISO-NE MP can extend a CTS Trust Relationship to a NYISO MP**
 - *When this NYISO MP submits a bid with the ISO-NE MP as the counterparty, the Non-NYISO FRP confirmation status will automatically be set to ‘Y’*




Manage Trust Relationships

- ◆ **To manage CTS Confirmed Trust Relationships select “Manage Trusts” link at the top of page**
- ◆ **Window displays list of trusted organizations**
- ◆ **To create a new Confirmed Trust Relationship select Organization from drop down list**
- ◆ **To remove a Confirmed Trust Relationship, select “remove” option**

Manage Trust Relationships

Logged in as: Testuser Bravo (22222) Manage Trusts Upload/Download Visit Marketplace Logout

Joint Energy Scheduling System 

Contracts Bids

Contract Search Results (8)

ID	Source
1000001	NYISO_LBMP_REFERENCE
1000002	N.E._GEN_SANDY PD
1000003	N.E._GEN_SANDY PD
1000004	N.E._GEN_SANDY PD
1000005	HQ_GEN_CEDARS_PROXY
1000006	HQ_GEN_WHEEL
1000007	N.E._GEN_SANDY PD
1000008	N.E._GEN_SANDY PD

Manage Trust Relationships

Organization Name	
Fake NYISO Org 1	<input type="button" value="remove"/>
Fake NYISO Org 2	<input type="button" value="remove"/>
Fake NYISO Org 3	<input type="button" value="remove"/>
Fake NYISO Org 4	<input type="button" value="remove"/>
Fake NYISO Org 5	<input type="button" value="remove"/>
Fake NYISO Org 6	<input type="button" value="remove"/>

Create Trust Relationship

NYISO Organizations:

Search Contracts

Transaction ID:

Transaction Type:

Source:

Sink:

User Ref:

Actions for Selected: Page 1 of 1 | Displaying 1 - 8 of 8

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CTS Confirmed Trust Relationships

- ◆ **Non-NYISO FRP confirmation is not required for a DAM bid to reach VALIDATION PASSED status.**
- ◆ **Confirmation status of HAM bid is set based on any Trust Relationship in place upon DAM submittal (DAM to HAM via NYISO)**
- ◆ **Both NYISO FRP and Non-NYISO FRP confirmations are required for a HAM bid to reach VALIDATION PASSED status**
- ◆ **Changes to a Confirmed Trust Relationship after DAM submittal are not reflected in corresponding HAM bid (DAM to HAM via NYISO)**



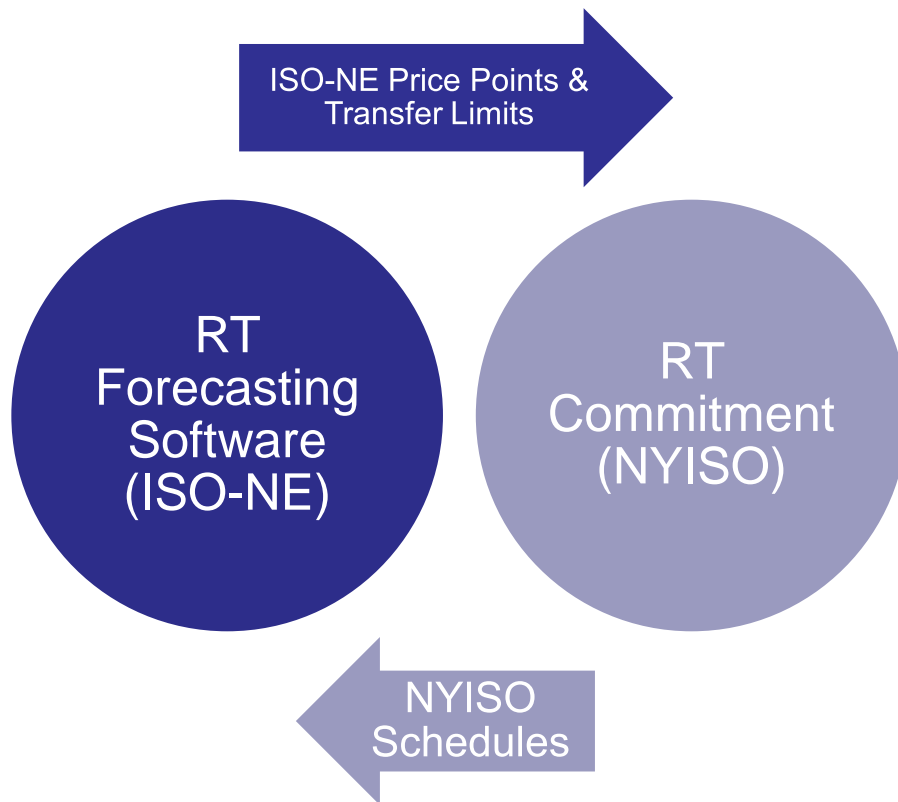
CTS Trust Relationships Matrix

Who's Granting Trust Relationship	Logged in as NY MP (i.e., NY MP point-of-view)	Logged in as NE MP (i.e., NE MP Point-of-view)
Neither Grants a TR to the other	Can change "NYISO FRP" confirmation only	Can change "Non-NYISO FRP" confirmation only
NY MP Grants TR to NE MP	Can change "NYISO FRP" confirmation only	Can change both "Non-NYISO FRP" and "NYISO FRP" confirmations
NE MP Grants TR to NY MP	Can change both "NYISO FRP" and "Non-NYISO FRP" confirmations	Can change "Non-NYISO FRP" confirmation only
NY and NE MPs Grant TRs to each other	Can change both "NYISO FRP" and "Non-NYISO FRP" confirmations	Can change both "NYISO FRP" and "Non-NYISO FRP" confirmations
Remember that changing Trust Relationships will not change the status of Confirmations		

CTS BIDS AND MARKET EVALUATION



How it will work



In Real Time,

- ◆ **NYISO will incorporate ISO-NE's forward looking prices into its existing scheduling process for the purpose of evaluating CTS bids.**
- ◆ **ISO-NE will incorporate advisory schedules from NYISO's scheduling process for the purpose of determining its forward-looking prices.**



CTS Import example

- ◆ **This example includes the following assumption:**
 - *The marketer is assumed to be purchasing in ISO-NE at the ISO-NE price, importing energy from ISO-NE into NY and selling the energy in NY at the NY price.*

- ◆ **Before T-75:**
 - *In JESS the marketer enters an import (from ISO-NE to NY) CTS Interface Bid of \$5/MWh for the first fifteen minutes of hour T (and import CTS Interface Bids for the other three intervals of hour T)*



CTS Import example

- ◆ **Between T-75 and T-40:**
 - *NYISO bid evaluation process begins, NYISO RTC sends schedules to ISO-NE*

- ◆ **T-40:**
 - *ISO-NE sends prices for T to NYISO RTC:*
 - **ISO-NE projects a price of \$17/MWh**



CTS example with Timeline

- ◆ **T-30 to T-15:**
 - *The NYISO RTC projects prices of \$23/MWh for the first interval of hour T.*
 - *Since ISO-NE's price projection was \$17/MWh and RTC's projected price is \$23/MWh, the CTS Transaction is scheduled:
(\$17/MWh + \$5/MWh = \$22/MWh < \$23/MWh).*
 - *NYISO RTC sends look-ahead schedules to ISO-NE*

- ◆ **Settlement is done with the RTD prices !**



Bid Options Comparison

Feature	ISO-NE	PJM
Hourly LBMP	Wheeling through the NYCA only	Wheeling through the NYCA only
15-Min LBMP	No	Yes
Hourly CTS	Wheeling through the NECA only	No
15-Min CTS	Yes	Yes
Multi-point CTS Bid Curves	No	Yes
15-Minute Bid Curves	Yes	Yes



CAPACITY



NYISO Capacity Requests

- ◆ **The process will remain the same as today where NYISO will provide notification to ISO-NE MPs that they must get transactions scheduled for their ICAP obligations to NYISO**
- ◆ **The notification will be done via a web posting and email notification**

Relevant Web Postings

Reminder: NYISO and Non-NYISO pricing data:

http://www.nyiso.com/public/markets_operations/market_data/interregional_data/index.jsp

External RTO/ISO CTS prices (PJM and ISO-NE)

http://www.nyiso.com/public/markets_operations/market_data/pricing_data/index.jsp



SETTLEMENT CHANGES



Settlements

- ◆ **NYISO and ISO-NE will eliminate settlement fees allocated to external transactions at the NE External Proxy Bus on a reciprocal basis**
- ◆ **This is a continuation of earlier efforts that resulted in the elimination of NTAC and TSCs fees for transactions at the NY-NE border implemented in 2004**



Fee Elimination

◆ Fees eliminated at the NE CTS Enabled External Proxy Bus:

- *NYISO Cost of Operations; both injections and withdrawals*
- *Bid Production Cost Guarantees*
- *Residuals*
- *Margin Assurance Payments*
- *Operating Reserves*
- *Voltage Support*



Make Whole Payments

- ◆ **Transactions at the CTS Enabled Interface are ineligible for RT BPCG**
 - *RT BPCG for import transactions at all proxies was eliminated in April 2014*
- ◆ **Transactions at the CTS Enabled Interface are ineligible for Import Curtailment Guarantees**



UPLOAD/DOWNLOAD CHANGES



Background

- ◆ **Revisions to JESS upload/download templates are required to support implementation of Coordinated Transaction Scheduling (CTS) with ISO-NE**
 - *Revised templates will impact all JESS upload/download users regardless of whether they plan use CTS with ISO-NE*
- ◆ **Deployment of the revised templates is targeted for October 2015**



Background-*continued*

- ◆ **Revised template specification document is posted with the March 30, 2015 MIWG meeting materials**

New Template Fields

◆ NYISO Organization

- *Replaces a spare field in existing download files*
- *Identifies NYISO organization responsible for bid*

◆ Non-NYISO Organization

- *Replaces a spare field in existing download files*
- *For bids at CTS Enabled External Proxy Bus, identifies ISO-NE organization responsible for bid, otherwise this field will be blank (null)*

◆ NYISO Organization ID

- *Replaces a spare field in existing upload file*
- *Used by an ISO-NE MP submitting bid at CTS Enabled External Proxy Bus to identify NYISO MP counterparty for transaction*
- *NYISO MP must leave this field blank (null) when submitting bids (all proxies)*

◆ Non-NYISO Organization ID

- *Replaces a spare field in existing upload file*
- *Used by a NYISO MP submitting bid at CTS Enabled External Proxy Bus to identify ISO-NE MP counterparty for transaction*
- *NYISO MP must specify a valid ISO-NE organization ID when submitting bid at CTS Enabled External Proxy Bus, otherwise must be blank (null)*

New Template Fields - *continued*

◆ GIS Identifier

- *Replaces spare field in existing upload/download files*
- *Allows user to provide identifier used in the New England Power Pool Generation Information System (NEPOOL GIS)*
- *Must leave this field blank (null) when submitting bid that does not include CTS-NE proxy*

◆ Non-NYISO FRP Confirmation Status

- *Replaces spare field in existing upload/download files*
- *Flag (Y/N) indicating the confirmation status of the Non-NYISO Organization associated with the bid (if applicable)*
- *For bids that do not include a CTS Enabled External Proxy Bus this field will be blank (null) in the response file*



Template Field Revisions

◆ NERC Priority

- *Non-Firm transmission service for external transactions in the NYISO markets eliminated in October 2014. As a result, all transactions use the Firm (7) NERC priority*
- *For upload files the NERC priority field will no longer be required. This field will become a 'spare'*
- *For response files NYISO will continue to provide the NERC priority in the existing field*

◆ Updated field names used in upload/download documentation for:

- *'FRP Confirm Status' changed to 'NYISO FRP Confirm Status'*
- *'Last Update User' changed to 'Assigned Contact User'*



Sandbox Testing

- ◆ Sandbox testing sessions are planned for the following:
 - *July 28 – 30*
 - *August 25 - 27*
 - *September 23 – 25*
 - *October 7 – 9*
 - *November TBD*

- ◆ All JESS users are urged to participate in Sandbox testing !



Informational Resources:

- ◆ ***Joint Energy Scheduling System User's Guide***
(includes Upload/Download info, be sure to use the "Draft" version in the Guides Under Review folder for the post-deployment changes) at:

http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp

- ◆ ***JESS training at (under Miscellaneous):***

http://www.nyiso.com/public/markets_operations/services/market_training/library/index.jsp

- ◆ ***Market Services Tariff (MST) - Section 17***

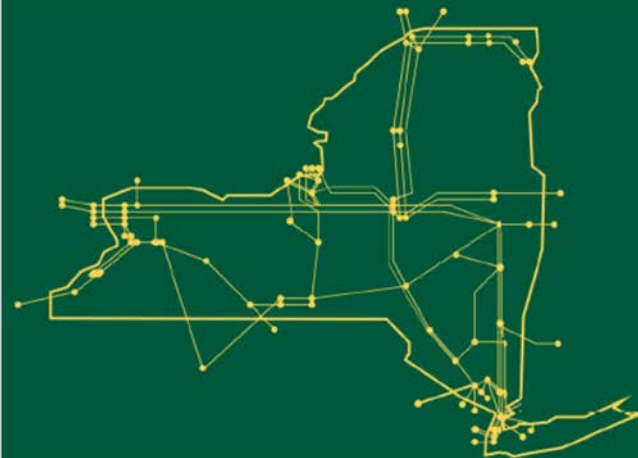
- ◆ ***Open Access Transmission Tariff (OATT) – Att. J***



Questions?



The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



www.nyiso.com

Addendum:
JESS Enhancements
CTS Bidding at the Sandy Pond Proxy
(NY's proxy bus with ISO-NE)

December 9, 2015



DAM and RTM bids at the Sandy Pond Proxy

Day-Ahead Market (DAM)

- ◆ NYISO DAM Market Import and Export bids are always evaluated as LBMP Imports or LBMP Exports, regardless of the bid schedule type chosen.
- ◆ LBMP Exports: +\$1000 is the highest economic priority that an MP can offer an LBMP export, and -\$1000 is the lowest economic priority.
- ◆ LBMP Imports: -\$1000 is the highest economic priority that an MP can offer an LBMP import and +\$1000 is the lowest economic priority.

Day-Ahead Conversion to Real-Time (RTM)

- ◆ All accepted NYISO DAM Imports and Exports will automatically be converted to Real-Time offers.
 - *NYISO DAM bids must include a Real-Time Bid Price to be used for Real-Time CTS offers. No default RT bid is automatically inserted in this situation. The Real-Time Bid Price should be provided in the form of a CTS Interface Bid value (**RTM Bid Price** field).*
- ◆ RT Market Import and Export bids are always evaluated as CTS Interface Bids to Import or Export at this proxy (**Schedule Type** field).

Create Bid-DAM

Logged in as: **CHANT**

[Manage Trusts](#)

[Upload/Download](#)

[Visit Marketplace](#)

[Logout](#)

Joint Energy Scheduling System

[Dashboard](#) > [Bidding](#)

Contract Details

New Contract created

Transaction ID: 123456

Source: NYISO_LBMP_REFERENCE

User Reference: TESTFORBILL

NYISO FRP: Fake NY Org

Non-NYISO FRP: Fake ISONE Org

GIS: |

Sink: NE_LOAD_SANDY PD

Multi-Hour Block Transaction: No

You are receiving curtailment notifications for this Contract.

Your Organization is a Financially Responsible Party ("FRP") for this Contract.

New Bid

In Progress

NERC Tag:

Bid Date:

Num Hours:

Market:

Schedule Type:

SCA:

PSE:

Unique Num:

RCA:

Curve Time Frame: n/a

Energy Profile MW:

RTM Bid Price:

Point	1	2	3	4	5	6	7	8	9	10	11
MW	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
\$ Price: ?	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

- NYISO DAM bids are evaluated as LBMP type bids regardless of Bid Schedule Type
- There is no change to NYISO DAM bid evaluation with CTS-NE
- The RTM Bid Price must be specified as a CTS Interface Bid – the spread between Sink and Source price

Examples of LBMP Import and Export bid evaluation:

N.E._GEN_SANDY PD DAM LBMP: **\$29**

Import:

Point	1	2	3
MW	10	30	40
\$ Price	10	30	40
	\$10 < \$29 Bid Accepted	30 > 29 Bid Rejected	40 > 29 Bid Rejected

•Bid evaluated as a Supply Bid, so it's the minimum an MP is willing to be paid for the energy

•If Bid \$ < proxy (source) LBMP, the bid is economic.

N.E._GEN_SANDY PD DAM LBMP: **\$29**

10 MW may be sold

Export:

Point	1	2	3
MW	40	30	10
\$ Bid Price	10	30	40
	\$10 < \$29 Bid Rejected	30 > 29 Bid Accepted	40 > 29 Bid Accepted

•Bid evaluated as a Load Bid, so it's the maximum MP is willing to pay for the energy

•If Bid \$ ≥ proxy (sink) LBMP, the bid is economic.

NE_LOAD_SANDY PD DAM LBMP: **\$29**

10 MW + 30 MW = 40 MW may be purchased

NOTE: For LBMP Exports, the HIGHER the bid value, the HIGHER the economic priority. For LBMP type imports, the LOWER the value, the HIGHER the economic priority.



CTS-NE: Bidding in the RTM at Sandy Pond proxies (NE_LOAD_SANDY PD, N.E._GEN_SANDY PD)

- RT Bids will be evaluated as CTS bids, the projected spread between Sink and Source prices

Example of CTS Import and Export bid evaluation:

Import:

ISO-NE Price Projection	NY RTC Price Projection	Expected Spread	CTS Bid	Accepted?
17	23	6	5	Accepted
17	23	6	6	Marginal, partially accepted
17	23	6	7	Rejected

Export:

ISO-NE Price Projection	NY RTC Price Projection	Expected Spread	CTS Bid	Accepted?
23	17	6	5	Accepted
23	17	6	6	Marginal, partially accepted
23	17	6	7	Rejected

NOTE: The LOWER the bid value is, the HIGHER the economic priority of scheduling. For CTS type bids this applies to both Imports and Exports.



ADDITIONAL SIMPLE CTS MARKET EXAMPLE: EXPORT*



*SEE SLIDE 40 FOR AN IMPORT EXAMPLE



CTS Export example

- ◆ **This example includes the following assumption:**
 - *The marketer is assumed to be purchasing in NY at the NYISO price, exporting energy from NY into ISO-NE and selling the energy in New England at the ISO-NE price.*

- ◆ **Before T-75:**
 - *In JESS the marketer enters an export (from NY to ISO-NE) CTS Interface Bid of \$5/MWh for the first fifteen minutes of hour T (and CTS Interface export bids for the other three intervals of hour T)*



CTS Export example

- ◆ **Between T-75 and T-40:**
 - *NYISO bid evaluation process begins, NYISO RTC sends schedules to ISO-NE*

- ◆ **T-40:**
 - *ISO-NE sends prices for T to NYISO RTC:*
 - **ISO-NE projects a price of \$23/MWh**



CTS example with Timeline

- ◆ **T-30 to T-15:**
 - *The NYISO RTC projects prices of \$17/MWh for the first interval of hour T.*
 - *Since ISO-NE's price projection was \$23/MWh and RTC's projected price is \$17/MWh, the CTS Transaction is scheduled:
(\$23/MWh - \$5/MWh = \$18/MWh > \$17/MWh).*
 - *NYISO RTC sends look-ahead schedules to ISO-NE*

- ◆ **Settlement is done with the RTD prices !**