

CTS Status Update

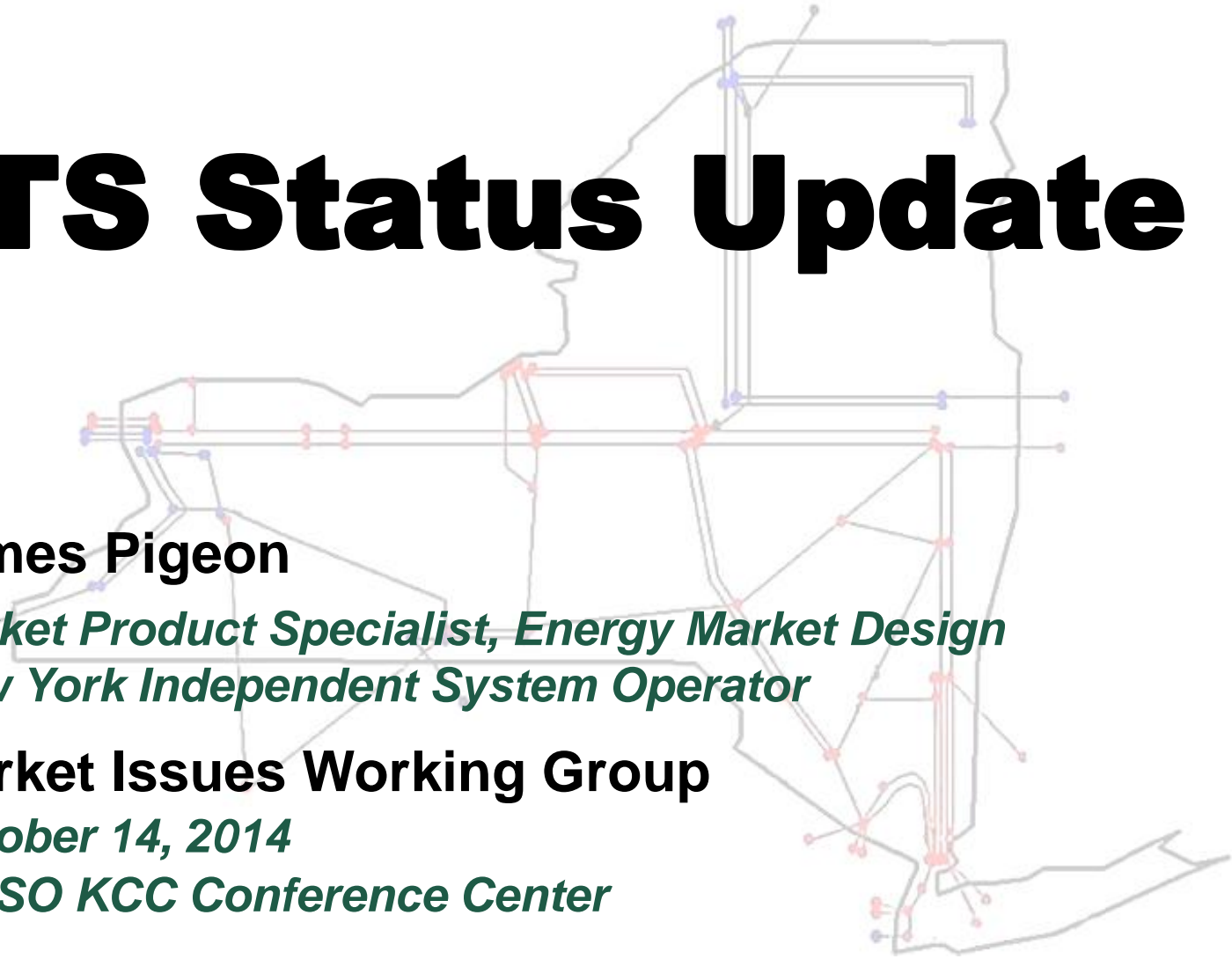
James Pigeon

*Market Product Specialist, Energy Market Design
New York Independent System Operator*

Market Issues Working Group

October 14, 2014

NYISO KCC Conference Center



What is CTS? The Concept

- ◆ **Coordinated Transaction Scheduling (CTS)**
A new protocol that allows market participants to schedule energy based on projected price differences between market areas.

Why CTS? The Benefits

- ◆ **Coordinated Transaction Scheduling (CTS)**

The objective of CTS is to improve efficiency of energy scheduling with neighboring ISOs.

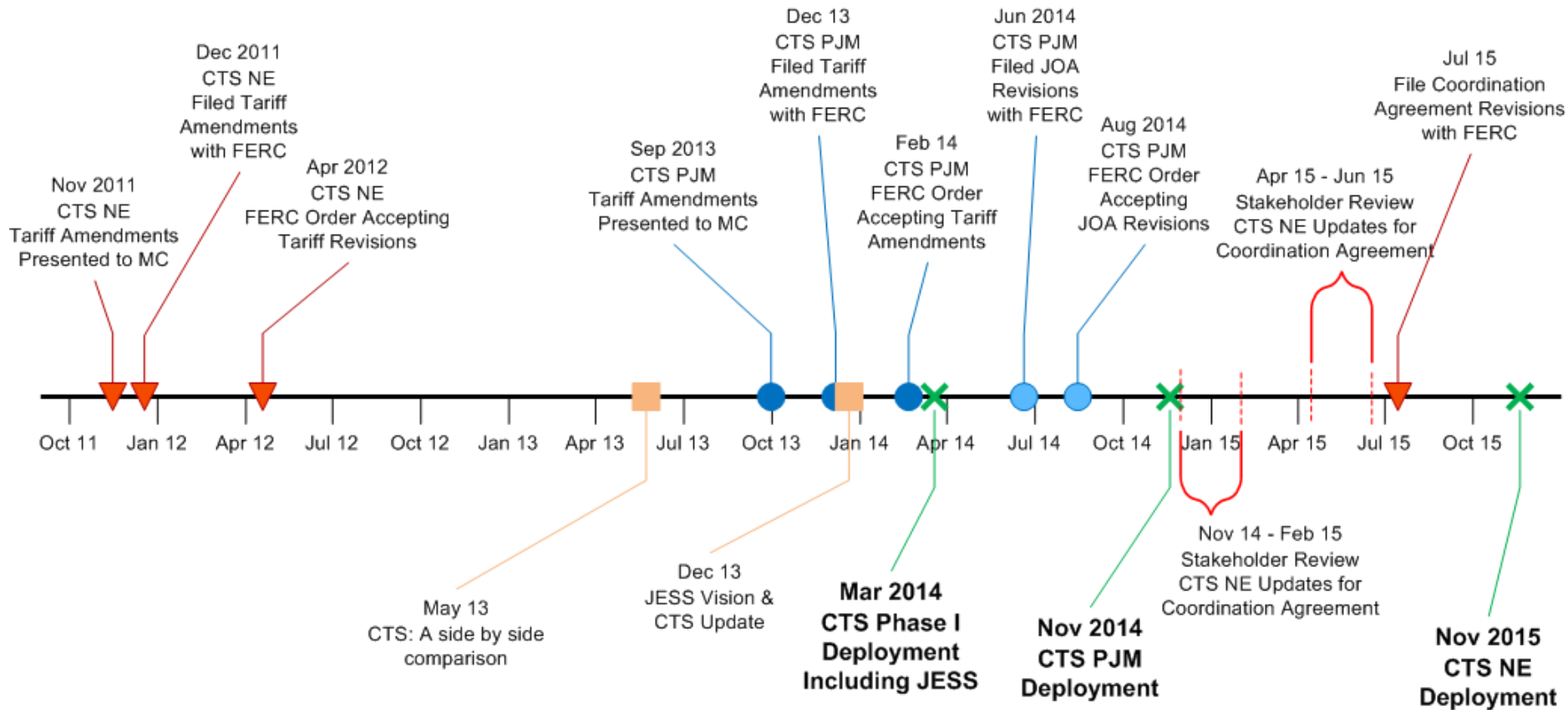
- ◆ **Price Convergence**

CTS will allow market participants to schedule based on the price difference between the NYISO and the neighboring ISOs, thereby improving the arbitrage opportunities.

- ◆ **Efficiency Impact**

CTS will improve the convergence of energy prices throughout the regions resulting in more efficient utilization of existing transmission capability.

When is CTS? The Timeline



Common CTS Elements

Scheduling Horizon

- Import and Export schedules will be established 15 minutes before the schedule flows
- Wheel-Through schedules will continue to be established 45 minutes before the schedule flows

Make Whole Payments

- Not Offered

Import Curtailment Guarantees

- Not Offered

CTS Design Differences

Design

Import/Export
LBMP Bidding

Import/Export
CTS Bidding

Wheel-Through
Bidding

PJM

Permitted, 15
minute
scheduling only

Permitted, 15
minute
scheduling only

Permitted,
Hourly
scheduling only

ISO-NE

Not Permitted

Required, 15
minute
scheduling only

Permitted,
Hourly
scheduling only

CTS Design Differences

Design

CTS Scheduling
Basis

CTS Scheduling
Locations

PJM

Forward Looking
PJM LMPs

Keystone
Linden VFT
Neptune
HTP

ISO-NE

Forward Looking
Multi-Segment
ISO-NE Supply
Curve

Sandy Pond

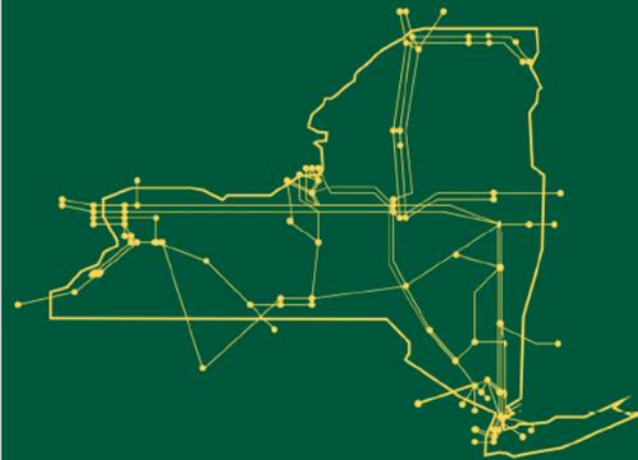
CTS Design Differences

Feature	PJM	ISO-NE
Fees and Transmission Charges	Not Eliminated	Eliminated
Project Timeline	Implementation Q4 2014	Implementation Q4 2015

Useful Links

- ♦ **Coordinated Transaction Scheduling (CTS): Tariff Amendments, November 29, 2011**
http://www.nyiso.com/public/webdocs/markets_operations/committees/mc/meeting_materials/2011-11-29
- ♦ **Proposed Tariff Amendments to Add External Coordinated Transaction Scheduling Market Rules and Request for Waiver, December 28, 2011**
http://www.nyiso.com/public/webdocs/markets_operations/documents/Legal_and_Regulatory/FERC_Filings/2011-1999/2011/Dec
- ♦ **Order Accepting Tariff Revisions, April 19, 2012**
http://www.nyiso.com/public/webdocs/markets_operations/documents/Legal_and_Regulatory/FERC_Orders/2012/Apr
- ♦ **Special Pricing Rule Updates for CTS, March 26, 2013**
http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2013-03-26
- ♦ **Coordinated Transaction Scheduling (CTS) between NYISO & PJM - Fourth Joint Meeting, June 25, 2013**
http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2013-06-25/CTS%20NY+PJM%2006192013%20FINAL.pdf
- ♦ **Coordinated Transaction Scheduling (CTS)- NYISO & PJM: Tariff Language Review, September 30, 2013**
http://www.nyiso.com/public/webdocs/markets_operations/committees/mc/meeting_materials/2013-09-30/CTS%20PJM%20MC%2009302013%20FOR%20PRESENTATION.pdf

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