



Seams Lessons

from elsewhere



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WMIC RTO Seams Workshop
June 20, 2000

US ISOs Formed & Forming

PJM Interconnection

Desert Star

ISO - New England

Alliance RTO

New York ISO

SPP RTO

California ISO

MAPP ISO

ERCOT ISO

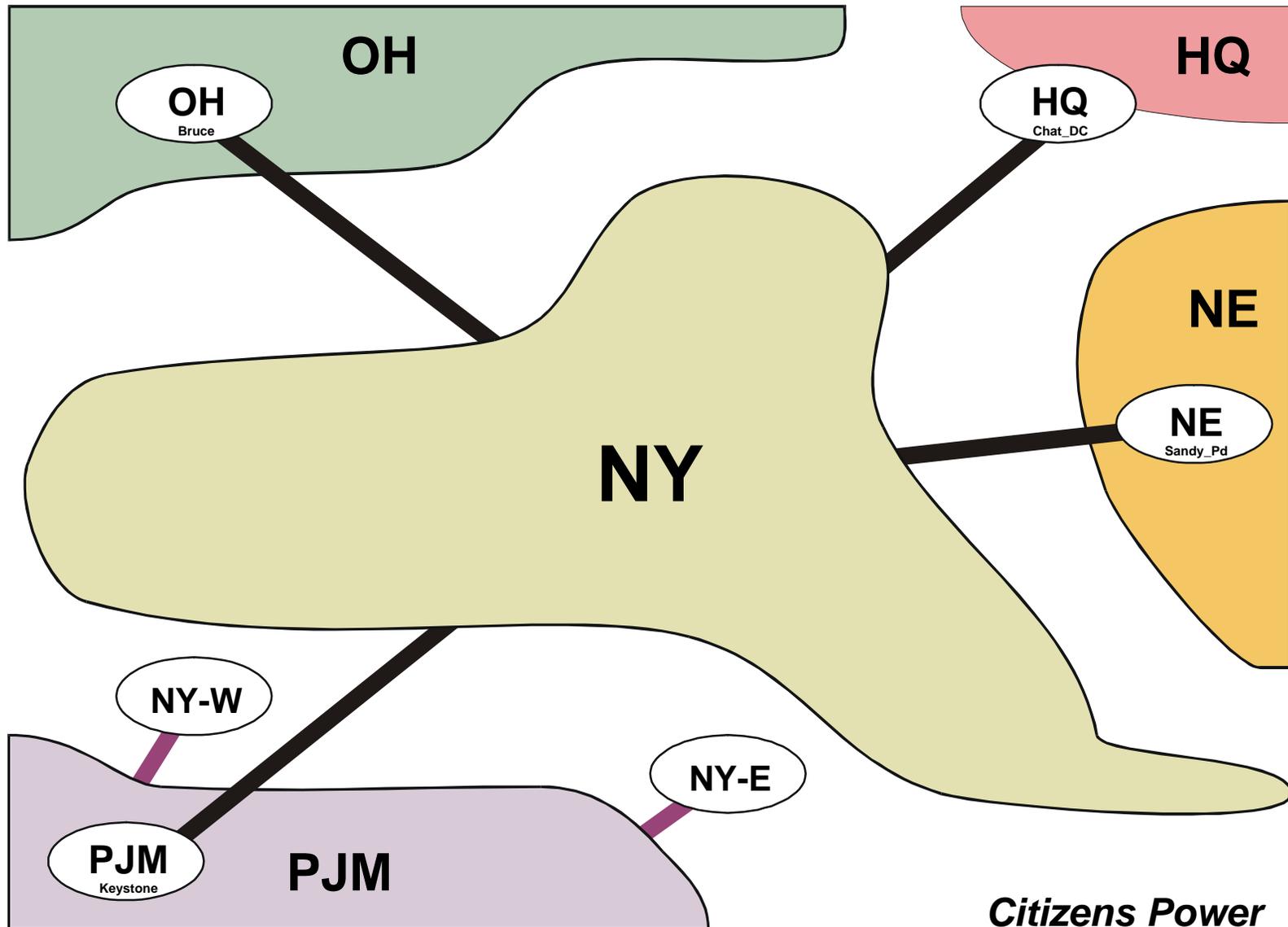
Entergy Transco

Midwest ISO

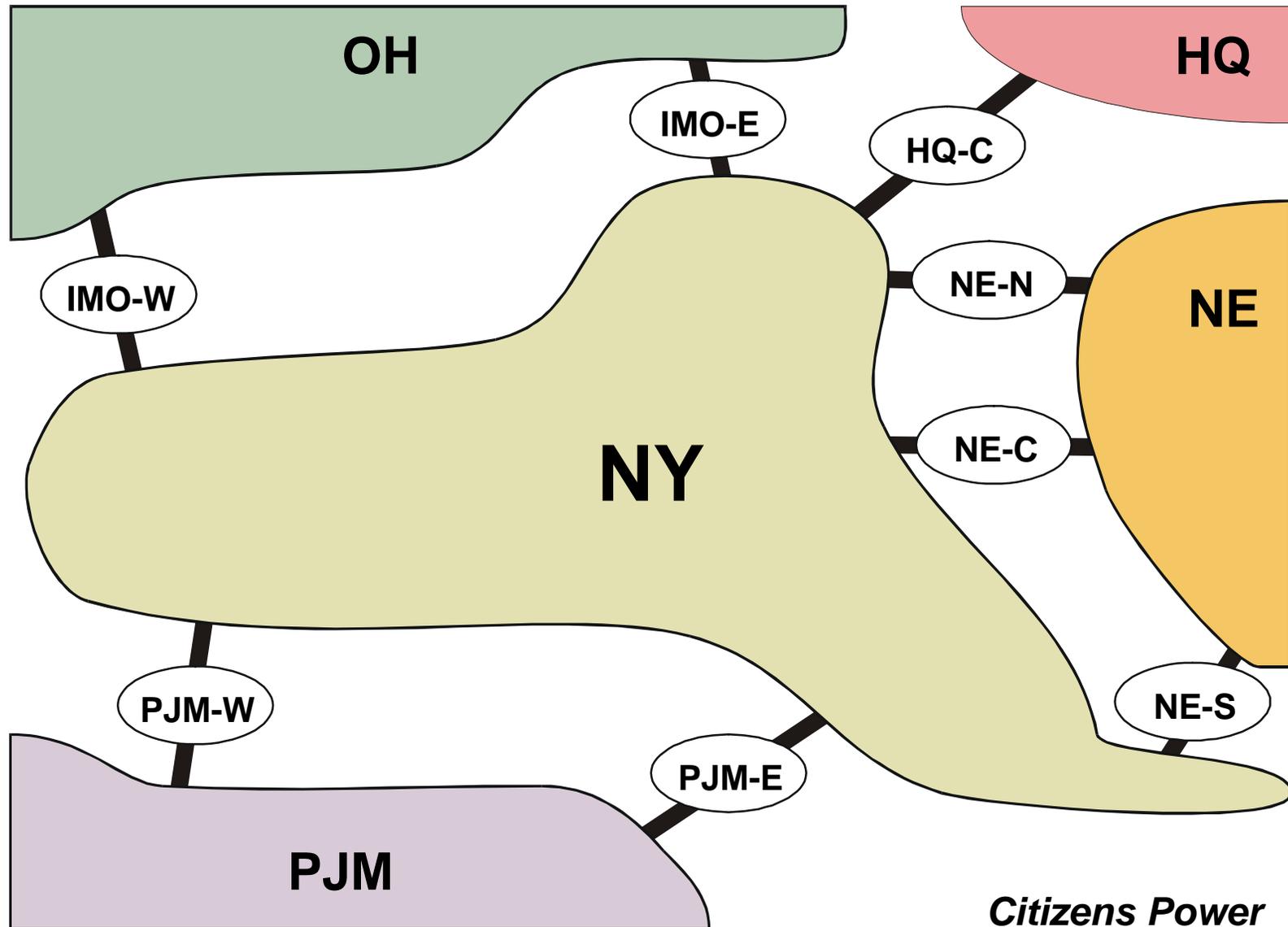
RTO Seams Matters

- ★ **Interface Models & Capabilities**
- ★ **Transmission Service Products**
- ★ **Reservations & Scheduling Deadlines**
- ★ **Market Product Definitions**
- ★ **Congestion Management**
- ★ **Loading Constraints**
- ★ **Ancillary Services**
- ★ **Settlement Practices**

NYISO Seams Issues



NYISO Seams Solution



PJM Interconnection

Formed from tight power pool as per Order 888

Initial FERC filing July 1996

ISO & PX operational April 1997

Independent Board of Managers

Three agreements ... Three key committees

**Day-Ahead Hourly Energy Market; Monthly Capacity
Credit Market; FTR Auction**

LMP Congestion Management

Next? 2-Settlement System & Regulation Market

www.pjm.com

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ISO - New England

Formed from tight power pool as per Order 888

Initial FERC filing December 1996

ISO operational July 1997; PX May 1999

Independent Board of Directors

NEPOOL committees

**Day-Ahead Hourly Energy Market; Monthly Installed
Capability Market; Operable Capacity; 10M SpinRes;
AGC; 10M NonSpinRes; 30M NonSpinRes**

ISO Congestion Management reflected in Uplift

Next? Congestion Management & Multi-Settlement

www.iso-ne.com

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New York ISO

Formed from tight power pool as per Order 888

Initial FERC filing January 1997

ISO operational December 1999

Independent Board of Directors

Management Committee

Two-Settlement Energy Market; Installed Capacity Auction; Ancillary Services "Market"; TCC Auction

LBMP Congestion Management

Next? LBMP Seams? ISO Market Conflicts?

www.nyiso.com

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California ISO

Initiated by state action

Initial FERC filing 1997

ISO operational March 1998

Stakeholder Board of Governors

California PX Energy Market organized separately

**Real-Time Imbalance Market; Ancillary Services
Market; Congestion Management Market; FTR Auctions**

Adjustment Bid Congestion Management

Next?

www.caiso.com

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ERCOT ISO

Initiated by state action

Initial PUCT filing June 1996

ISO operational September 1996

Stakeholder Board of Directors

Technical Advisory Committee

OASIS; transmission reservations; system monitoring; contingency response; no direct control

Redispatch-Based Congestion Management

Next? Restructuring for Retail Access

www.ercot.com

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Midwest ISO

Initiated by transmission owner action

Initial FERC filing January 1998

ISO to be operational June 2001

Independent Board of Directors

Advisory Committee

**OASIS; transmission reservations; system security;
transmission planning; no direct control**

Redispatch-Based Congestion Management / LMP?

Next? Get operational; get bigger

www.midwestiso.com

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