Transmission Expansion Advisory Committee Meeting

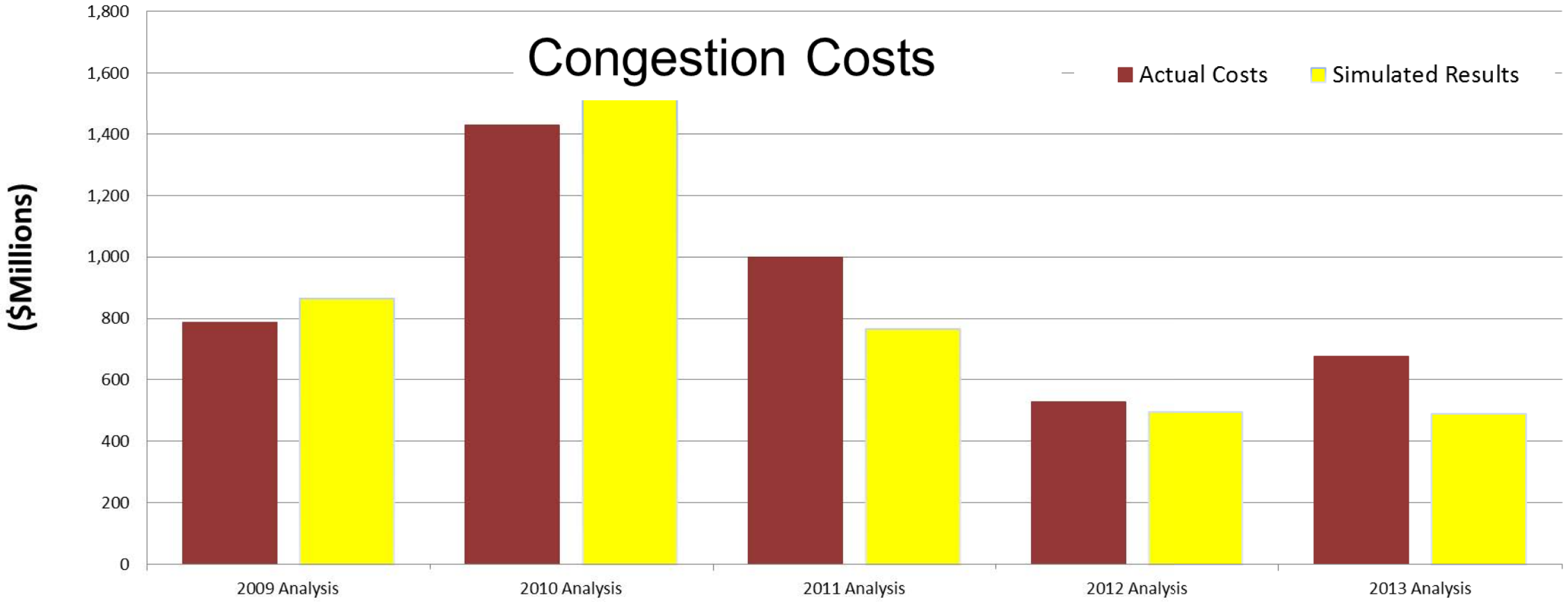
# 2014 Market Efficiency Analysis

June 5, 2014

# 2013 Historical Market Congestion

- Total market congestion for 2013 about $676 million
- Top 20 congestion causing events account for about 66% of total congestion
- Future RTEP upgrades will help reduce congestion associated with 2013 historical constraints

# Historical Market Simulation Results – Actual vs. Simulated Congestion



# 2013 Historical Market Congestion – Top 20 Congestion Causing Constraints

| Rank | Constraint | Type | Location | # of Hours | Approximate total Market Congestion ($) | % of Total Congestion | Cause |
|---|---|---|---|---|---|---|---|
| 1 | AP South | Interface | 500 | 6330 | $169.1 | 25.0% | West - East Transfers and Long Term maintenance outages; Future reactive upgrades expected to reduce congestion |
| 2 | West | Interface | 500 | 1845 | $30.7 | 4.5% | West - East Transfers; Future reactive upgrades expected to reduce congestion. |
| 3 | Bridgewater - Middlesex | Line | PSEG | 3046 | $25.0 | 3.7% | Maintenance Outages |
| 4 | ATSI | Interface | ATSI | 18 | ($23.5) | -3.5% | ATSI Scarcity event ; Future baseline upgrades expected to reduce congestion |
| 5 | Bedington - Black Oak | Interface | 500 | 2148 | $22.4 | 3.3% | West to East transfers and long term maintenance outages |
| 6 | Breed - Wheatland | Flowgate | MISO | 2344 | $19.8 | 2.9% | Market to Market Congestion |
| 7 | BCPEP | Interface | PEPCO | 1293 | $19.7 | 2.9% | West - East Transfers |
| 8 | Bagley - Graceton | Line | BGE | 2087 | $19.3 | 2.9% | Maintenance Outages; Future baseline upgrade expected to reduce congestion |
| 9 | Cloverdale | Transformer | AEP | 2534 | $17.1 | 2.5% | Maintenance Outages; Future baseline upgrade expected to reduce congestion |
| 10 | Crete - St Johns Tap | Flowgate | MISO | 1943 | $15.1 | 2.2% | Market to Market Congestion; Operated to higher ratings in 2014 |

# 2013 Historical Market Congestion – Top 20 Congestion Causing Constraints

| Rank | Constraint | Type | Location | # of Hours | Approximate total Market Congestion ($) | % of Total Congestion | Cause |
|---|---|---|---|---|---|---|---|
| 11 | Monticello - East Winamac | Flowgate | MISO | 2041 | $12.9 | 1.9% | Market to Market Congestion |
| 12 | Laporte - Michigan City | Line | AEO | 3382 | ($12.9) | -1.9% | Market to Market Congestion |
| 13 | Clover | Transformer | DOM | 30 | ($12.2) | -1.8% | External flow contribution |
| 14 | Braidwood | Transformer | COMED | 8252 | $11.4 | 1.7% | M2M congestion; high external flow contribution |
| 15 | 5004/5005 Interface | Interface | 500 | 562 | $10.5 | 1.6% | West - East Transfers; Future reactive upgrades expected to reduce congestion. |
| 16 | Byron - Cherry Valley | Flowgate | MISO | 72 | $10.2 | 1.5% | Storm Damage Outages ; Future baseline upgrade expected to reduce congestion |
| 17 | Benton Harbor - Palisades | Flowgate | MISO | 2495 | $9.7 | 1.4% | Market to Market Congestion |
| 18 | Conastone - Graceton | Line | BGE | 869 | $9.2 | 1.4% | Maintenance Outages; Future baseline upgrade expected to reduce congestion |
| 19 | South Canton | Transformer | AEP | 515 | $9.1 | 1.3% | Maintenance Outages |
| 20 | AEP - DOM | Interface | 500 | 2746 | $9.0 | 1.3% | West - East Transfers |

| | |
|---|---|
| Top 20 | $371.6 |
| Total Congestion | $676.0 |

# Next Steps

Market Efficiency Preliminary Results: July

- Case files posted July
- Stakeholder feedback on model: July-September
- PJM review for acceleration candidates: July-September
- Proposal window opens: November

# Market Efficiency Data Posting

- Market Efficiency Web Page located at
  http://www.pjm.com/planning/rtep-development/market-efficiency.aspx

- PJM will post Market Efficiency Case Files for all study years
  - Access requires CEII confirmation
  - Access requires Vendor (Ventyx) confirmation
  - No confidential data provided or used in analysis (i.e. actual bid data)
  - XML Format

- Reference Files
  - Input Assumptions Summary
  - Updated Modeling Document will provide details of setup and modeling methods