

Uplift in the NYISO Markets

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Defining Uplift in NY

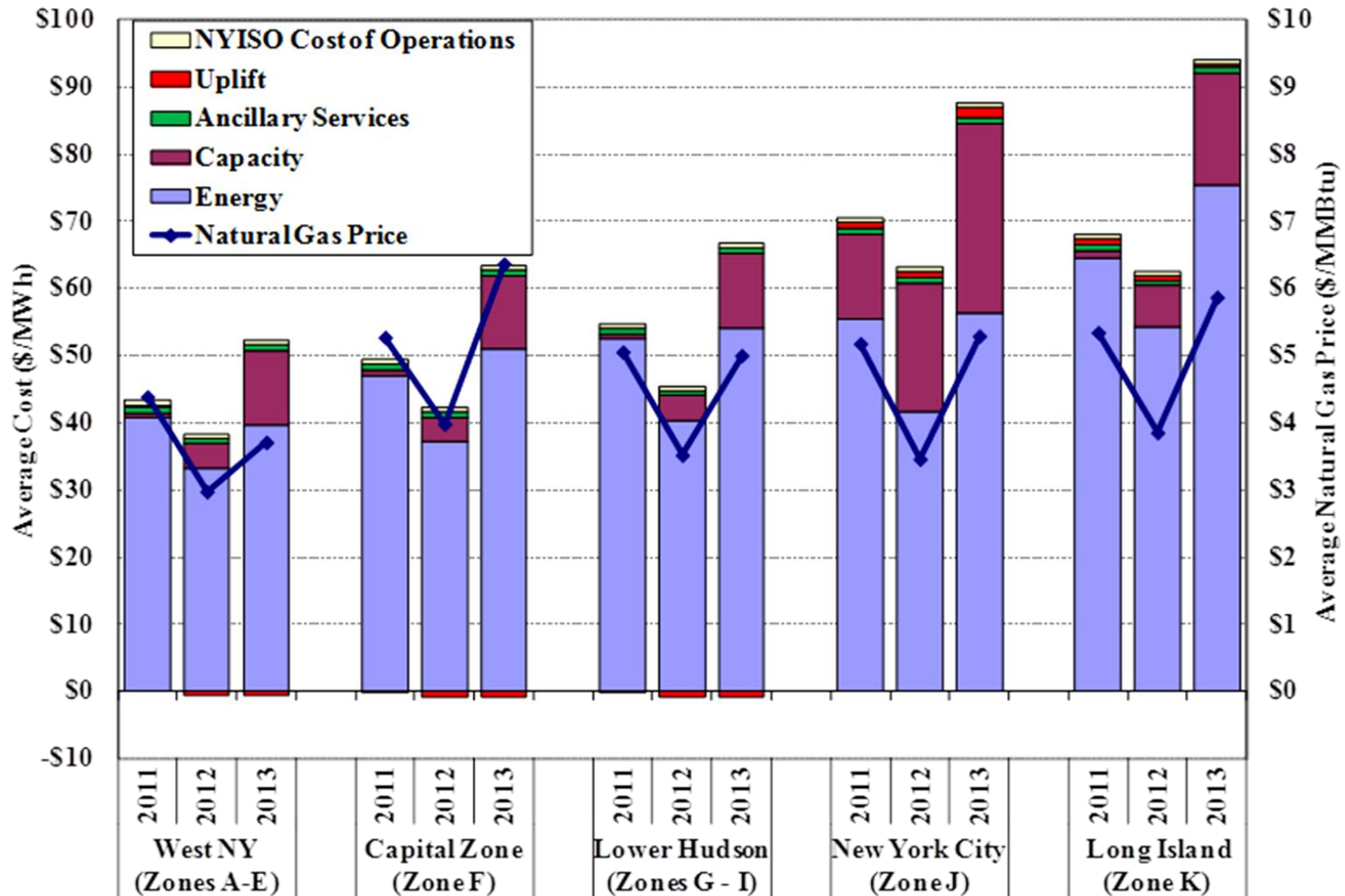
◆ Make Whole Payments

- *NYISO has two forms of make whole payments*
 - Bid Production Cost Guarantees (BPCG)
 - Day Ahead Margin Assurance Payments (DAMAP)

◆ Residuals

- *Caused by:*
 - Differences in resources used to meet Load between Day Ahead and Real-Time Markets
 - Differences in the payments' and charges' calculation of losses
- *Can be positive (charges to load) or negative (payments to load)*

Significance of NY Uplift



Breakdown of Uplift

◆ Make Whole Payments

- *Bid Production Cost Guarantees for Day Ahead and Real-Time Commitments*
- *Day Ahead Margin Assurance Payments in Real-Time for Day Ahead Committed Resources*

◆ Residuals

- *Loss Residuals in the Day Ahead Market*
- *Energy, Congestion and Loss Residuals in the Real-Time Market*

Make Whole Payments

- ◆ **Bid Production Cost Guarantees (BPCG)**
 - ◆ *Covers resource startup and minimum load costs that are not otherwise covered by energy revenues over a day period*
- ◆ **Day Ahead Margin Assurance Payments (DAMAP)**
 - ◆ *Protects a resource's Day Ahead Margin when the NYISO's real-time instructions prevent the resource from meeting its Day Ahead schedule*

Major Drivers for BPCG

◆ Day Ahead

- *Economic Commitments for NYCA Reliability (DAM Statewide)*
- *Commitments for Local Reliability Rules (DAM Local)*
- *Day Ahead Reliability Units (DAM Statewide or Local)*

◆ Real-Time

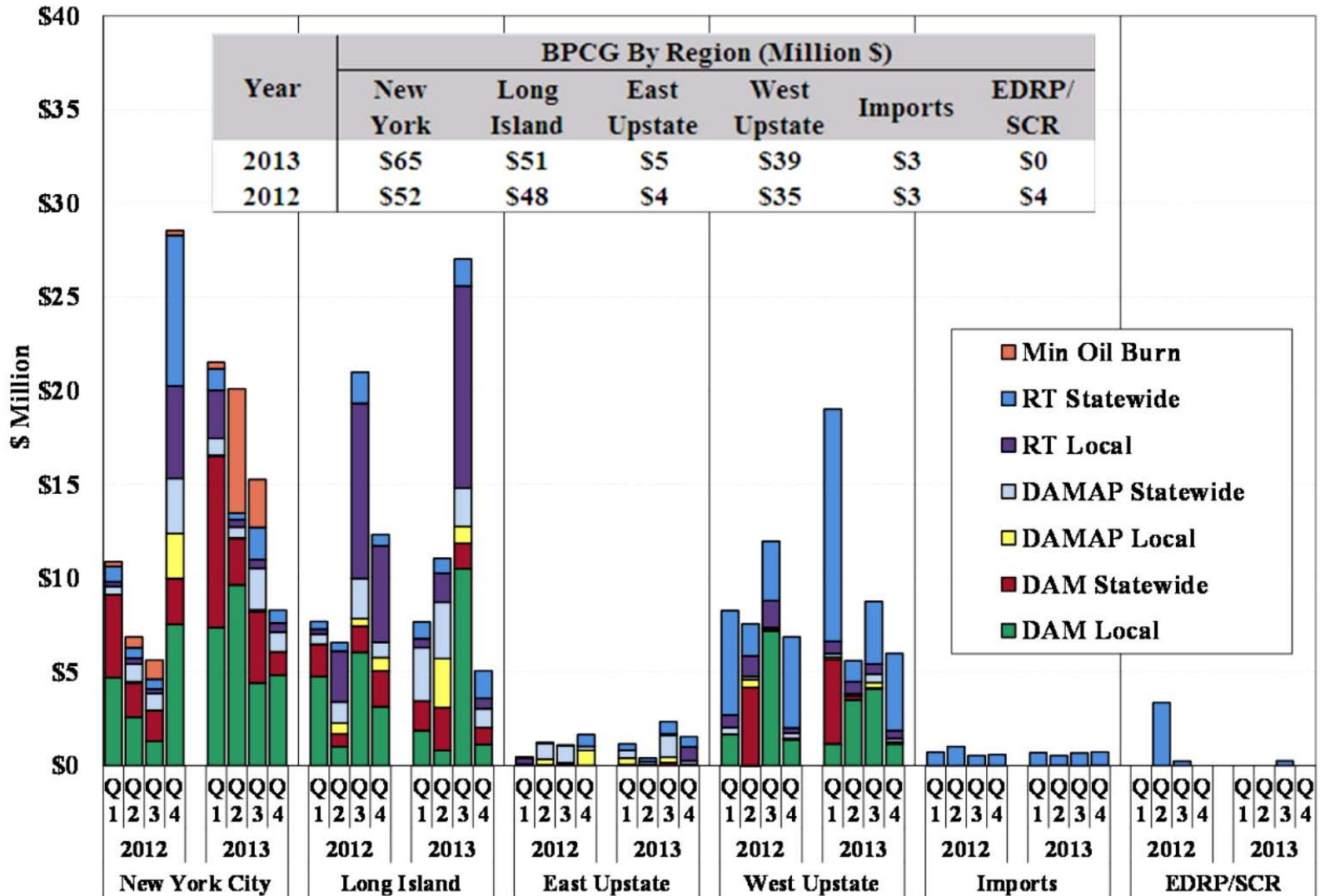
- *Economic Commitments for NYCA Reliability (RT Statewide)*
- *Out of Merit Requests for Local Reliability Rules (RT Local)*
- *Supplemental Resource Evaluation (RT Statewide or Local)*
- *Activations of Demand Response Special Case Resources (RT Statewide)*
- *Managing Local Gas Constraints (Min Oil Burn)*

Major Drivers for DAMAP

◆ Real-Time

- *Reduction in transmission system capability from the Day Ahead Market evaluation (DAMAP Statewide or Local)*
- *Out of Merit Requests for Local Reliability Rules (DAMAP Local)*

Make Whole Payments



Residuals

◆ DAM Residuals

- *Consist of both energy and loss revenue collections and payments*
- *By design, there is a net over collection of revenues to cover losses due to the marginal loss treatment for loss settlement*

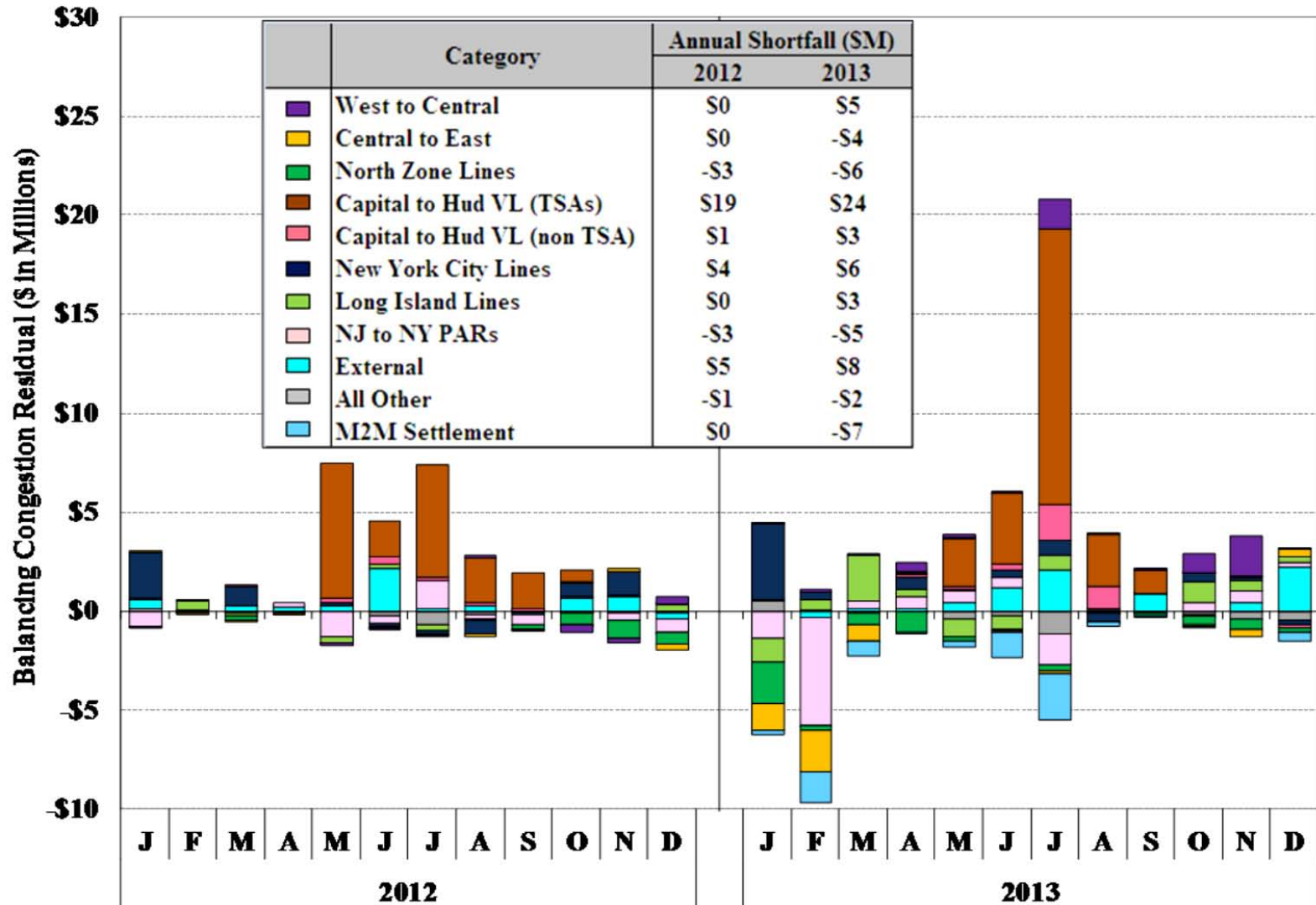
◆ Balancing Residuals

- *Consist of energy, loss, and congestion cost differences with regard to resources used to meet Day Ahead Load obligations in Real-Time*

Major Drivers for Residuals

- ◆ **Interface Derate – NYCA Security**
 - *A special category for this is Storm Watch*
- ◆ **Interface Derate – External Security**
- ◆ **Unscheduled Transmission Outages**
- ◆ **Unscheduled “Loop Flow”**

Congestion Residuals



Uplift Cost Allocation

◆ Statewide Uplift

- *Allocated to all NYCA LSEs, Exports and Wheel-Through Transactions using a load ratio share allocation*

◆ Local Uplift

- *Allocated to the LSEs within Transmission District benefitting from the Local Reliability Rule using a load ratio share allocation*

Allocation for Virtuals

◆ Virtual Supply Transactions

- *Allocated a portion of the BPCG payments made to those additional resources scheduled to meet NYISO forecast load within the Day Ahead Market*
- *This is a very small charge and equates to approximately \$0.003/MWh*

◆ Virtual Load Transaction

- *No uplift allocation*

Market Features that Limit Uplift

- ◆ **Fully funded Transmission Congestion Contracts (TCCs)**
- ◆ **Integrated reliability commitment as part of the DAM optimization window**
- ◆ **Five-minute pricing, scheduling and settlement**

Managing Uplift

- ◆ **NYISO initiatives**

- *Improved transparency*
- *Daily review to address root causes of Real-Time Market uplift and Day Ahead forward congestion costs*

Improved Transparency

- ◆ NYISO provides detailed insights into the causes and costs of uplift via Operations Performance Metrics Monthly Report



http://www.nyiso.com/public/webdocs/markets_operations/committees/mc/meeting_materials/2014-10-29/Agenda%2003_Operations_Report.pdf

Actions Taken

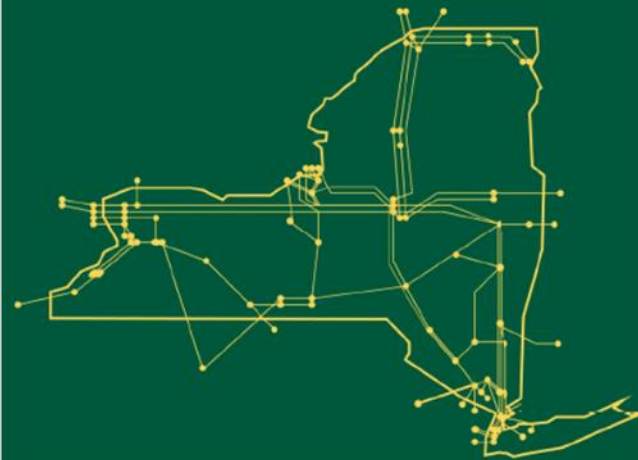
- ◆ **2005 – Implemented new integrated EMS/MMS with forward-looking real-time dispatch and shortage pricing**
 - *Reduction in uplift costs from the subsequent two years paid would have paid for this project*
- ◆ **2008 – Initiated daily review process of market outcomes**
 - *This has led to continuous refinements to operating procedures and market models aimed at creating a more efficient marketplace*
- ◆ **2009 – Added the ability to nominate must run units in the DAM to minimize over commitments**
- ◆ **2011 – Added the capability to economically schedule interchange on a 15-minute basis**

Moving Forward

- ◆ **The NYISO has several initiatives underway to improve price formation at the NYISO including:**
 - *Graduated Transmission Shortage Pricing*
 - *Refinements to GT pricing*
 - *Comprehensive Shortage Pricing*
 - *Comprehensive Scarcity Pricing*



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.



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