

NYISO Scheduling & Dispatch Penalties

NYISO Market Structures Working Group
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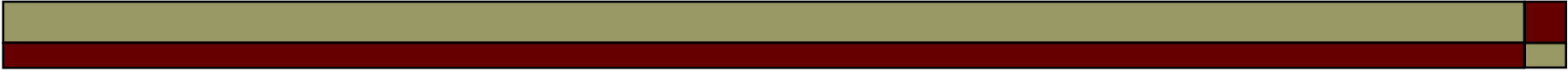
Issues for Today's Discussion

- How the NYISO's Current Scheduling and Dispatch Penalty Structure Operates
- Problems With The Structure
- What Should Be Considered In Defining Appropriate Scheduling And Dispatch Penalties



What Are The Scheduling and Dispatch Penalties

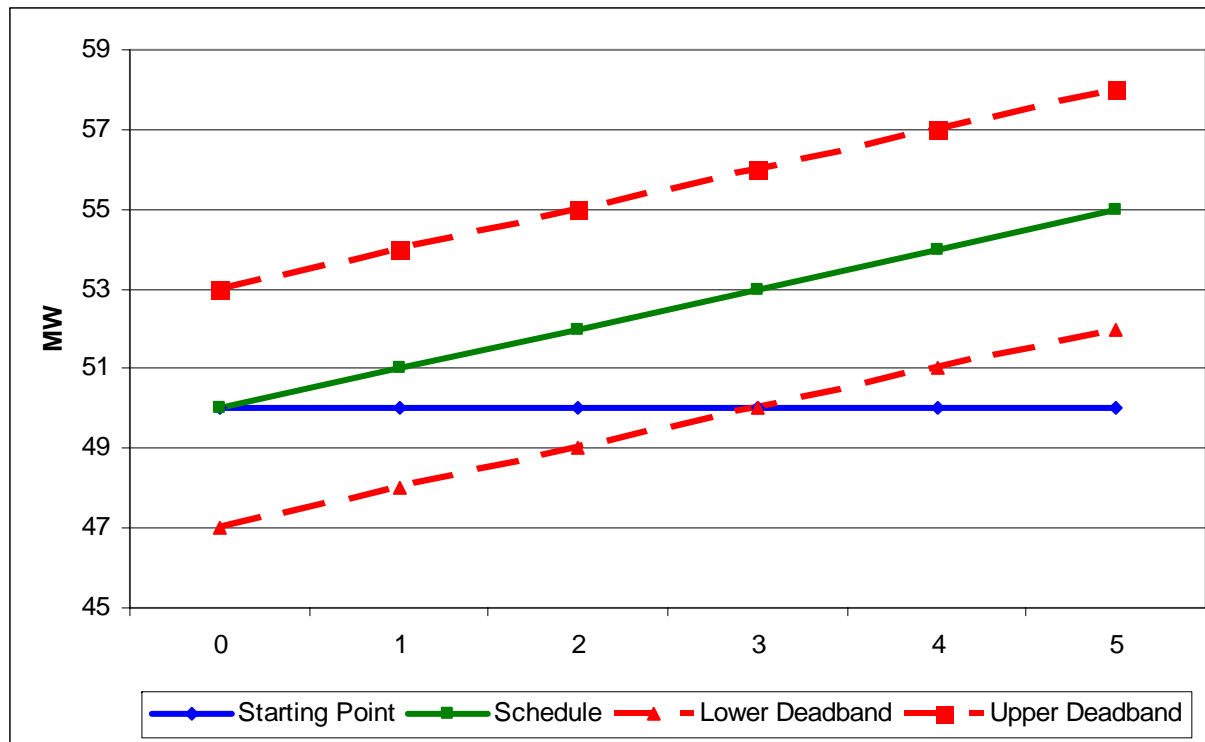
- The Current Penalty Structure Consists of Two Pieces
 - Suppliers Are Not Paid For Energy Deliveries That Exceed Their Schedule By More Than 3% Of The Generator Normal Upper Operating Limit
 - Suppliers Are Charged A Penalty If Their Deliveries Are More Than 3% Of The Generator Normal Upper Operating Limit Below Their Schedule



How The Penalties Are Applied To On-Dispatch Generators

- The Generator Schedule Is Determined Every RTD Cycle Based Upon The Generator's Actual Operating Level
- Generators That Are Operating On Dispatch Are Unlikely To Be Assessed Significant Penalties

Penalty Treatment For On-Dispatch Unit

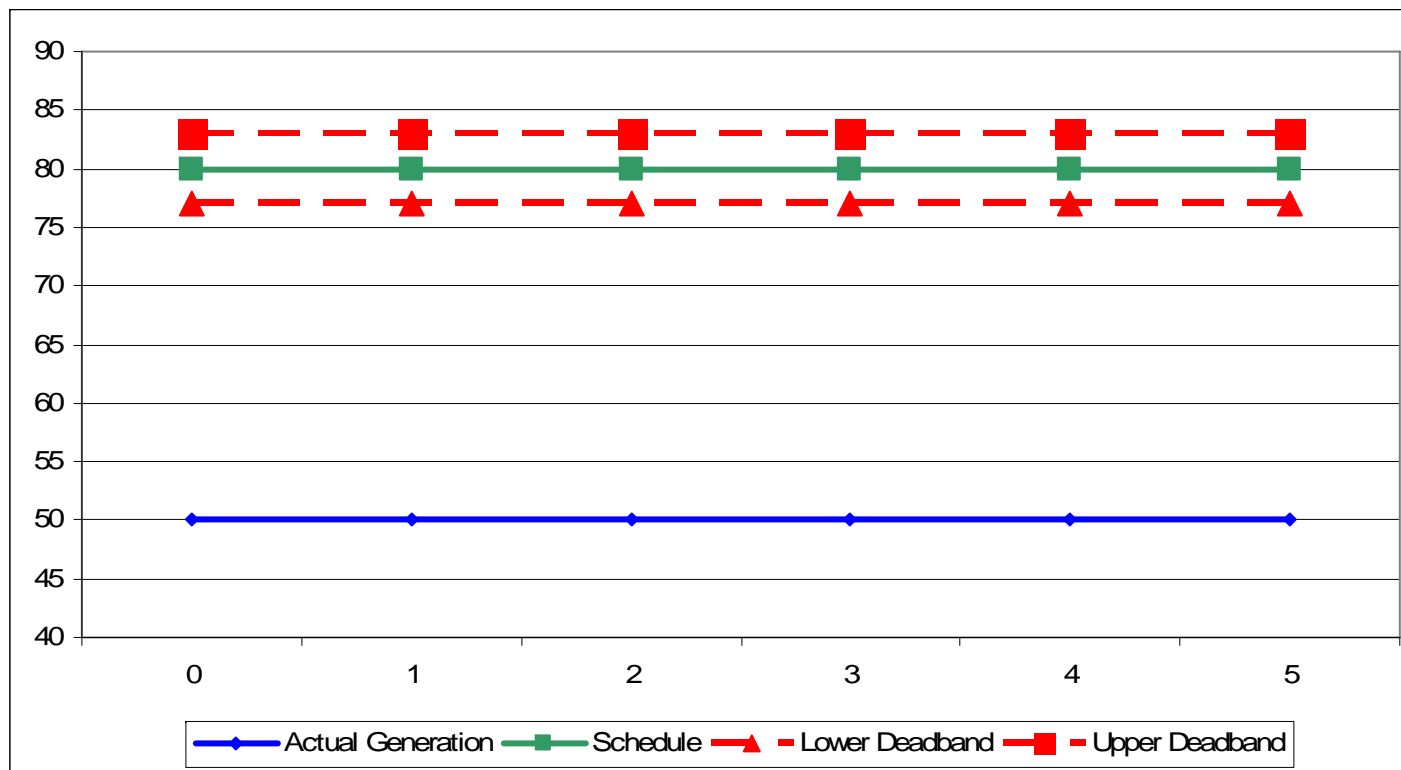




How The Penalties Are Applied To Off-Dispatch Generators

- The Generator Schedule Is Based Upon The Level That The Generator Forecast One to Two Hours before Actual Operation
- Actual System Operation (RTD and RTC) and Prices Are Based Upon The Actual Operating Level Of The Off-Dispatch Generators
- The Penalties Are Effectively Penalties For Not Scheduling Accurately

Penalty Treatment For Off-Dispatch Generators

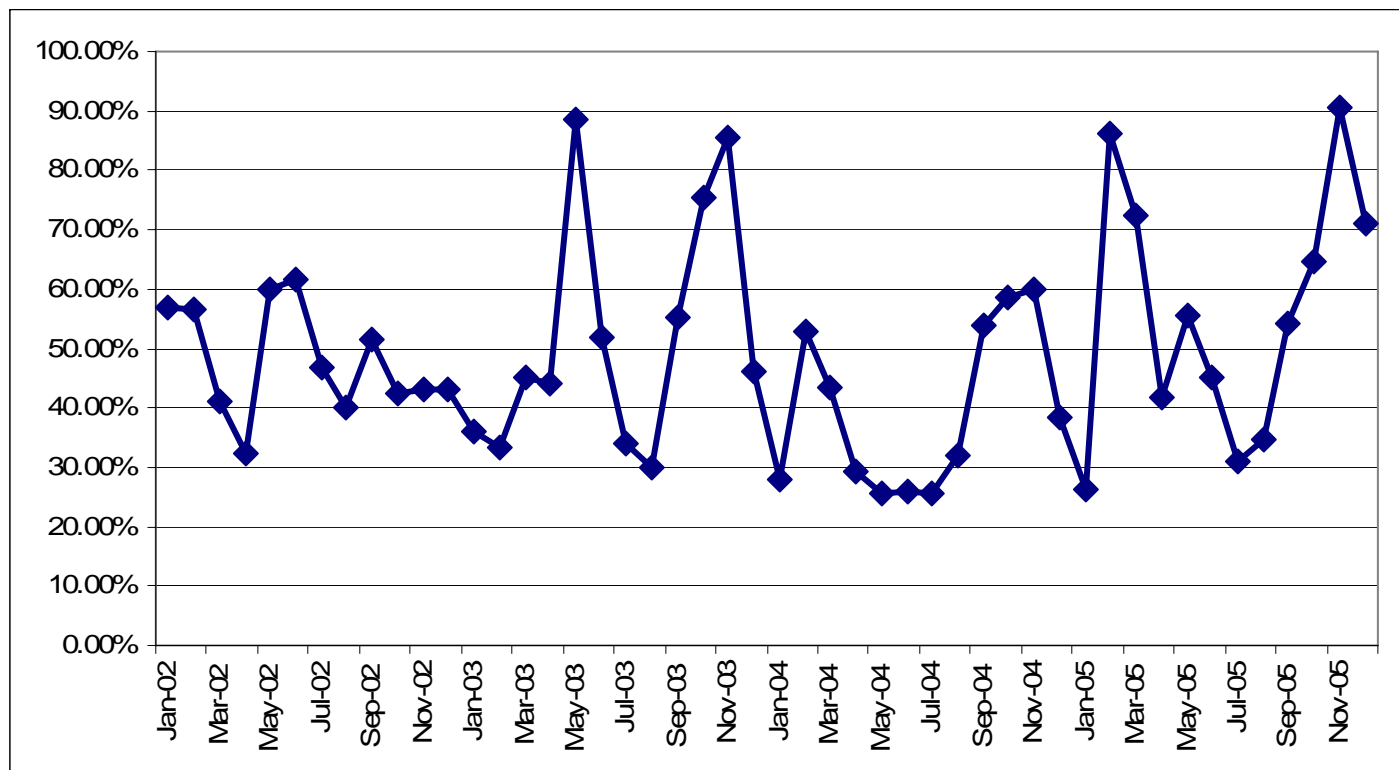




The Penalties Are Both Arbitrary And Extreme

- ❑ The Refusal To Pay For Generation Above The Deadband Essentially Treats The Generator's Additional Energy As Having No Value Even Though The LBMP Represents The Value Of The Energy
- ❑ The Undergeneration Penalty Is Based Upon Regulation Charges But Deviation Beyond a 5-Minute Period Has No Relation To The Need For, Or Price Of, Regulation
- ❑ The Undergeneration Penalty Is A Significant Percentage Of The LBMP

Undergeneration Penalty As A Percent of Real-Time LBMP





What Are The Costs To The System Of Being Off Schedule?

- ❑ There Has Been No Analysis Performed By The NYISO Or Market Advisor
- ❑ The Cost To The System Of On-Dispatch Generators Being Off Schedule Is Related To The Failure Of The LBMPs To Incorporate Impacts Of Persistent Under- and Over-Generation
- ❑ The Cost To The System Of Off-Dispatch Generators Being Off Schedule Is Mostly Incorporated Into LBMPs Because The LBMPs Reflect Actual Generation Levels
- ❑ There May Be Some Cost To The System Related To Not Being Able To Schedule Inflexible Generation – This Has Been Greatly Reduced With The Implementation Of RTC



What Are The Costs To The System Of Being Off Schedule? (Continued)

- Imports and Exports Are Now The Only Economically Evaluated Resources That Are Evaluated As Far Out As
- As Shown In The Market Advisor's Review of SMD2, There Is A Significant Error Level In They ISO's Forecast Of System Conditions On An Hour Ahead Basis. Consequently, Units Operating Off Schedule Are Unlikely To Be A Significant Factor In The Quality Of This Forecast And Might Actually Improve Performance If The Rules Were Revised.
- The NYISO Proposal On Wind Indicates That Off-Schedule Units Can Be Accommodated



The Current System Of Penalties Creates Costs

- Most Off Dispatch Generators Would Deviate From Their Schedules Either Because They Cannot Fully Control Their Generation Level Or To Respond To Persistent Price Signals
- The System Effectively Prohibits Off Dispatch Generators That Could Respond To Changed System Conditions From Responding
- This Results In More Volatile Real-Time Prices And Could Result In Shortages In Reserves That Would Not Have Occurred Absent The Penalties



How Should Scheduling And Dispatch Penalties Be Set?

- ❑ The Constant Need For Special Exemptions Is A Sign That The Existing Penalty Structure Is Flawed
- ❑ If The NYISO Retains Scheduling and Dispatch Penalties, Those Penalties Should Be Based On The Costs Imposed On The System From Operating Off Schedule, To The Extent Those Costs Are Not Already Incorporated Into The LBMP
- ❑ Once The Costs Of Deviating From A Schedule Are Determined They Should Be Applied To All Generating Sources
- ❑ Basing The Market Rules On A Series Of Special Exemptions Is A Poor Way To Design A Market