

# Startup and Shutdown Penalties

*Management Committee*

*June 21, 2005*

*Bob Thompson – NYISO*

*Agenda #6*

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## Startup and Shutdown Penalties

- **The Startup period is defined here as the period between the time a unit synchronizes to the Grid and the time it reaches it's bid minimum generation level.**
- **The Shutdown period is defined here as the period between the time a unit receives a zero basepoint and begins shutting down and the point where it ceases to supply energy to the grid.**

# Startup and Shutdown Penalties

- **This SU and SD discussion applies to all steam units, not only Combined Cycle.**
- **Steam units typically have an extended startup and potentially an extended shutdown period.**
- **Units have two choices under today's rules to recover startup and shutdown costs.**
  - *Bid an estimate into their startup bid.*
  - *Bid their startup period into the HAM as a price taker and recover LBMP for startup energy.*

# Startup and Shutdown Penalties

- **Units not bidding into the HAM simply dump their energy into the RT market and are not paid for it. This creates short term LF variations for the ISO.**
- **Units bidding into the HAM cannot properly follow dispatch instructions and accrue penalties when startup processes create variations from estimated output.**
- **The penalties are intended as incentives to modify behavior. They serve no purpose during these periods of operation.**

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## Startup and Shutdown Penalties

- **It is therefore recommended that the under-generation penalty be dropped during unit startup and shutdown periods and that during these periods units be paid LBMP for all energy produced.**

# Startup and Shutdown Penalties

- **Generators will be allowed to designate when they are in a start-up (SU) or shut down (SD) mode.**
- **Notification will be via email to a designated NYISO address.**
- **Submittals to cover SU or SD for any day must be submitted within 24 hours following the subject day.**
- **When received and applied by the ISO, the SU/SD designation for any hour will be applied for the whole hour.**

# Startup and Shutdown Penalties

- **The plant will self schedule with the NYISO a good-faith estimate of its energy production rate in quarter-hour increments for any hours when the SU/SD flag is set.**
- **The self scheduled energy estimates will be used for all NYISO real-time schedule forecasts.**
- **The SU/SD designation will apply only in real-time as it will have no meaning for the day-ahead commitment and scheduling process.**
- **The unit cannot use the SU/SD mode during any hour with a day-ahead schedule.**

## Startup and Shutdown Penalties

- **The plant will not be protected by a real-time bid production cost guarantee for any hour when the SU/SD flag is set.**
- **Use of the SU/SD flag will not otherwise disqualify a plant from the protection of a real-time bid production cost guarantee for hours when the SU/SD flag is not set.**



# Startup and Shutdown Penalties

- **To ensure that the elimination of penalties during S/U and S/D is not abused in some way, NYISO Market Monitoring is charged with pre-approving the eligibility for S/U and S/D maximum time periods for each qualified generator. Startup periods will normally be less than two hours. Shutdown periods will normally be less than one hour. Exceptions must be supported with justifications.**
- **Utilization of this feature will be monitored to identify any potentially abusive behavior.**
- **The NYISO will retain the right to revoke the ability of any plant to use the SU/SD flag should it detect an adverse market or operational impact and, after consultation with the generator, revoke the right or reach agreement to remedy the adverse impacts.**

# Startup and Shutdown Penalties

## ➤ **Tariff Revisions**

- *Definitions*
  - ▶ Add definitions for Startup and Shutdown Periods
  - ▶ Modify the definition of Compensable Overgeneration
- *Rate Schedule 3A*
  - ▶ Add generators in Startup Periods to the list of units exempt from Undergeneration Penalties
- *Article 4 of Services Tariff*
  - ▶ Modify the title of section 4.5f to be more consistent with the text of the section. (clarification)

# Startup and Shutdown Penalties

## ➤ Approval Process

- *Approved by BIC* *June 10*
  
- *MC approval* *June 21*
  
- *BOD approval and FERC filing* *July*
  
- *A detailed technical bulletin describing this rule change and the relevant rules and procedures will be produced and discussed with MPs at MSWG prior to deployment of this proposed change.*