



# Incorporating Fuel Costs into Reference Levels

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**PJM Stakeholder Meeting**

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# Agenda

- Reference Level Overview
- Including Fuel Costs in Reference Levels
- Fuel Cost Adjustments

# Reference Level Overview

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# Reference Levels

- A reference level is a “proxy” intended to reflect the offers that a Market Participant (MP) would submit for a generator if it was in a competitive market and could not exercise market power
- Reference levels are updated to incorporate expected fuel prices when appropriate and/or when MP provides updated fuel costs
  - Calculated using Day-Ahead fuel indices
- Separate Reference Levels are created for the Day-Ahead (DA) and the Real-Time (RT) Markets
- A comparison of reference levels to Generator Bids is used to perform conduct tests

# Incorporating Fuel Type/Cost Information into Reference Levels

- Market Participants identify the various fuel types (including fuel blends) available for use by a Generator
- Market Participants are also required to identify which of the available fuel types is the default fuel type
  - The default type is ordinarily the lowest cost fuel
- Under normal conditions a generator's Reference Level will be based on its default fuel type
- The NYISO uses the latest available fuel market prices to develop reference levels (Argus Media Services)
- MST Section 23.1.4.6.2 - Market Parties are required to monitor their Generator reference levels and to timely contact the ISO to request an adjustment to a Generator's reference level(s) when the Generator's fuel type or fuel price change.

# Hierarchy for Reference Level Development

- **Bid-based**
  - MST Section 23.3.1.4.1.1
- **LBMP-based**
  - MST Section 23.3.1.4.1.2
- **Cost-based**
  - MST Section 23.3.1.4.1.3
- **ISO Determined**
  - MST Section 23.3.1.4.2.1 or 23.3.1.4.2.2
- **All of the Reference Level types can be fuel price adjusted when appropriate**
- **A Generator may have multiple Reference Levels of each type if the Market Participant has multiple fuel types available**

# Fuel Costs Updates

- The NYISO uses the latest available fuel market prices to develop reference levels (Argus Media Services)
- These fuel market prices may not be the actual fuel costs faced by Market Participants to provide energy
- The NYISO provides Market Participants with two methods to report higher fuel costs
  - Urgent Reference Level Submittal via the RLS – cost submittal ordinarily approved in advance of bidding
  - Submitted Fuel Cost Adjustments (FCAs) along with Bids in the MIS – must pass initial screening using the fuel entry thresholds in effect, which is followed by an ex post review

# Including Fuel Costs in Reference Levels

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# Reference Level Consultations

- Market Participants may submit new or updated cost data, including fuel cost data, for generators through the Reference Level Software (RLS)
- The Reference Level Manual provides details on the various costs that may be included in Reference Levels and how these costs should be assigned in the RLS
- The following are the available Cost Data Families:
  - Heat Rate Data, Fuel & Emission Cost Data, Start-up Cost Data, Variable Cost Data, Risk & Opportunity Cost Data, Ancillary Services

# Reference Level Consultation Review

- **A Mitigation References Analyst or Engineer will review the submission and may request any documentation needed to verify the submitted data**
  - Documentation required can include, but is not limited to, fuel/consumable invoices, labor/maintenance contracts, or generator specific operating data (e.g. input/output curves to verify generator heat rate claims)
  - Additional information is requested, as needed
- **After completing the review, which may include additional discussions with the Market Participant, the MMU, and/or additional NYISO staff, the Analyst or Engineer will recommend a resolution**

# NYISO Initiated Consultations

- Mitigation References Analysts and Engineers perform periodic reviews of Generators' RLS cost data in order to ensure completeness and accuracy
- Upon determining that an update may be required, an Analyst or Engineer will notify the Market Participant of the revision that is being considered or request documentation from the Market Participant to re-verify the currently approved RLS data
- In consultation with the Market Participant and the MMU, the Analyst or Engineer will review any documentation that was supplied to determine if an update is required

# Consultation Resolution

- **The Mitigation References Analyst or Engineer will send an email summarizing the recommended resolution for any consultation and request the appropriate approvals**
- **Approvals are required from**
  - Mitigation References Supervisor, or designee
  - Principal Economist, or designee
  - The MMU is always contacted and invited to participate. Approvals are requested from the MMU, but may not be timely received if the need was immediate
  - Any approval disputes are brought to the Director of MMA for resolution
- **Once all approvals have been obtained, the Analyst or Engineer will make the approved changes to the cost data in RLS and references will be recalculated accordingly**

# Fuel Cost Adjustments

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# Fuel Cost Adjustments

- FCAs allow generators to make temporary changes to the fuel type or fuel price reflected in their Reference Levels
- FCAs allow generators to submit a fuel type and/or fuel price along with their energy offers
  - FCAs can be submitted for both the DA and RT markets
- If the FCAs satisfy the initial fuel entry thresholds that are in effect, the Generator's Incremental Energy and Min Gen Reference Levels are updated to reflect the modified fuel type and/or fuel price

# Fuel Entry Thresholds

- Fuel Entry Thresholds are used for initial screening of FCAs, prior to the fuel information being incorporated into Reference Levels
- Fuel Entry Thresholds are comprised of both Primary Thresholds and Secondary Thresholds
  - Primary Thresholds are calculated by the NYISO, periodically updated, and effective for all generators
  - Secondary Thresholds are requested by generators if the need arises to submit fuel costs that would exceed the Primary Thresholds
- If fuel information submitted with a Market Participants Bids for a Generator exceeds the fuel entry thresholds, the data will not be used to update Reference Levels

# Fuel Cost Adjustment Reviews

- NYISO is required to ensure the fuel costs submitted are consistent with competitive behavior
- RLS Reports are used by Mitigation Reference Analysts to analyze Fuel Cost Adjustments and determine if any submissions:
  - may be inaccurate
  - may have an impact on clearing prices or guarantee payments paid if they were inaccurate
- RLS Reports are used to the perform the conduct test and an initial screen for possible market (guarantee payment or LBMP) impact
  - A market re-run is performed to confirm market impact
  - See Section 23.4.3.3.3 of the MST



# Fuel Cost Adjustment Reviews (Cont.)

- If potentially inaccurate submissions, or submissions that could have a large impact on clearing prices or guarantee payments are identified, the NYISO will ask MPs to provide documentation to substantiate fuel information submitted, which may include providing information such as:
  - invoices, quotes from gas suppliers, evidence of increased gas balancing charges, other deals on trading platforms that establish a reasonable expectation of cost, or documentation of Operation Flow Orders
- If the fuel costs submitted by an MP are determined to be inconsistent with a reasonable expectation of costs, the NYISO may be required to revoke a Generator's ability to submit fuel cost adjustments with its offers and/or to impose financial sanctions

# Fuel Cost Adjustment Penalty

- Following consultation with the MP and the MMU, if NYISO determines the MP submitted inaccurate fuel information, the energy offers and fuel information submitted would be subject to the conduct and impact tests detailed in Section 23.4.3.3.3 of the MST
- NYISO will impose a penalty for each generator/day if the penalty calculation exceeds \$5,000 and temporarily revoke the MP's ability to use the automatic fuel submission functionality for its Generator (30 days for first offense, 60 days for second offense, 120 days for each subsequent failure)
- A financial penalty is only assessed if the NYISO determines the conduct caused an impact to clearing prices or guarantee payments paid to the MP

# Fuel Cost Adjustment Revocation

- Following consultation with the MP and the MMU, if NYISO determines the MP submitted inaccurate fuel information within the last 90 days that was biased in the MP's favor, NYISO may revoke a Generator's ability to submit fuel cost adjustments with its offers
- Biased means submitted fuel cost information that is more than 10% or \$0.50/mmbtu, whichever is greater, above the greater of actual cost or ISO indexed fuel cost
- Revocation of the ability to use the automatic fuel submission functionality is not contingent on a generator receiving a schedule to provide energy services

# Questions?

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- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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