

# Parameter Limited Schedules

MIC Meeting  
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# Background

- **Parameter limited schedules (PLS) were implemented for cost-based schedules and price-based schedules during emergencies on December 1, 2008.**
- **Units are placed on their cost-based schedule when they fail the TPS test, which incorporates their parameter limits.**
- **Units with physical limitations are able to submit exceptions to the Market Monitor on both a long-term and daily basis if they cannot adhere to the PLS matrix.**



# Agenda Items

- **Issue 1: Units offer extended minimum down times to avoid being turned off when not economic.**
- **Issue 2: Units offer more flexible parameters on price schedule than the PLS values required for cost schedules.**
- **PLS reviews are currently twice a year.**
- **Daily exception process needs to be modified.**
- **Sub-critical coal parameters may reflect prior operating conditions that are no longer relevant.**
- **PLS parameters for Medium-Large and Large Frame CT Unit parameters are less flexible than actual operating experience.**



# Issue 1

- **Currently, a unit may extend a minimum down time to avoid being turned off when not economic.**
- **The result:**
  - **Force PJM to run the unit when it is not economic**
  - **Reduce prices for other generating units as a result of increased, uneconomic supply**
  - **Increase operating reserve credits to the unit and operating reserve charges paid by other participants.**



# Issue 1: Proposed Solution

- **Recommend that PJM look further ahead (3-4 days) in order to schedule base-load units that do not cycle economically.**
- **Consensus solution: PJM dispatch tool should be more forward looking in order to better capture operation of baseload units that were not designed to cycle daily.**
- **Acceptable outcomes:**
  - **PJM tells unit on Friday that it is not needed until Monday morning**
  - **PJM tells unit on Friday that it is needed each day over the weekend**

## Issue 2

- **Currently, a unit may offer more flexible parameters on price schedules than the PLS values required for cost schedules**
- **For example, a unit may offer a 4 hour minimum run time on a price schedule and a 5 hour minimum run time on a cost schedule.**
- **This indicates that the unit does not offer its actual physical level of parameter flexibility on its cost-based schedules.**
- **The result, if PJM selects price based offer:**
  - **Higher market prices.**
  - **Increased operating reserve credits to the unit and increased operating reserve charges to other participants.**



# Issue 2 Proposed Solution

- **Additional clause in M11 rules**
- **At “2.3.4 Minimum Generator Operating Parameters – Parameter Limited Schedules”, new clause inserted:**
  - ***For all offer parameters, the Parameter-Limited Schedule shall be the less limiting of (a) the defined Parameter-Limited Schedule or (b) the submitted offer parameters for any schedule***



# Additional Issues Proposed Solutions

- **Daily exceptions should not be accepted if they continue through the year and circumvent the annual review process. Maximum of seven days with same exception during the year.**
- **Update Medium-Large and Large Frame CTs parameters to more accurately reflect operations.**





# Additional Issues: Consensus Proposed Solutions

- **PLS approval process should be annual, rather than biannual, as it is not necessary to review biannually.**
- **Exceptions approved based on 2006 offer data, and certain other exceptions, can be approved for a longer term than annual**
- **Update sub-critical coal minimum down time and maximum weekly start parameters in order more accurately reflect operations.**
- **The same daily exception may be renewable for a maximum of 30 days, after which the exception must be approved through the annual exception process.**



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