

# Parameter Limited Schedules

MIC

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# Background

- **Parameter limited schedules 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, in which case they must follow 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 PJM Parameter Matrix.**



# Issues Identified

- **Currently, parameter limited schedules are only enforced in cost-based schedules, except for emergencies.**
- **This permits the use of price-based schedule parameters as a possible method to exercise market power.**
- **For example, a unit may extend a minimum down time to avoid being turned off when not economic, which will increase operating reserve credits to the unit and operating reserve charges by other participants.**



# Issues Identified

- **Currently, generators may offer more flexible parameters on price schedules than 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.**
- **The result is that the unit does not offer its actual physical level of parameter flexibility on its cost-based schedules.**
- **The corresponding result may be increased operating reserve credits to the unit and increased operating reserve charges to other participants.**

# Example 1 Detail

- **Sub-Critical coal unit has a cost schedule minimum down time of 9.0 hours, and price-schedule minimum down time (MDT) of 24.0 hours, offered Monday-Thursday of the week. Friday-Sunday, the unit offers 72.0 offers on its MDT parameter.**
- **The unit is called on for economics on Monday, and is needed until Friday's peak (2300 EPT).**
- **Modified parameter means that additional balancing operating reserve credits will be paid because the unit stays on over the weekend.**
- **Result is a transfer of costs from the generation owner to those who pay operating reserve charges**



## Example 2 Detail

- **100 MW CT (economic minimum) has a cost-based minimum run time (MRT) of 5.0 hours, and a price-based MRT of 2.0 hours. The unit offers \$100/MWh on its price-based offer, and \$50/MWh on its cost-based offer.**
- **If the unit is not offer capped, it will receive \$20,000 for the two hour MRT.**
- **If the unit is offer capped, it will receive \$25,000 for the five hour MRT.**
  - **Defeats intent of the TPS test.**
  - **Receives additional operating reserve credits**
- **The 5.0 hour MRT is not a physical requirement of the unit, but it is able to offer at this level currently.**



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