Parameter Limited Schedules

MIC Meeting

September 13, 2011

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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 the lowest cost 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.**

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Consensus Items

- **Issue 1: Units offer extended minimum down times to avoid being turned off when not economic.**

- **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.**

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At Issue Items

- **Issue 2: Units offer more flexible parameters on price schedule than the PLS values required for cost schedules.**

- **PLS parameters for Medium-Large and Large Frame CT Unit parameters are less flexible than actual operating experience.**

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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.**

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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**

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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 cost based offer:**

    - **Higher market prices.**

    - **Increased operating reserve credits to the unit and increased operating reserve charges to other participants.**

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Issue 2

- **Unit offering more flexible parameters on price schedule is able to circumvent TPS test**
- **Unit offers 4 hour minimum run time on price, and 5 hour minimum run time on cost schedule.**
- **The result, if PJM selects cost-based offer:**
  - **Higher market prices**
  - **Increased operating reserve credits to unit and increased operating reserve charges to other participants**

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TPS Issue

- **Creates issue with Three-Pivotal Supplier test**
- **Total cost to market is greater when cost schedule is chosen, due to shorter MRT parameter on price based schedule.**
- **Issue caused by interaction between scheduling decisions and TPS test parameters.**

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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*

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Additional Issues Proposed Solutions

- **Daily exceptions: Maximum of seven days with same exception during the year.**

- **Update Medium-Large and Large Frame CTs parameters to more accurately reflect operations.**

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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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