



**DATE:** April 27, 2023  
**TO:** PJM Members  
**FROM:** IMM  
**SUBJECT:** PAI definitions and penalty rate

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This is the IMM's proposed approach to the definition of the nonperformance charge rate, the stop loss limit and the algorithmic definition of a PAI.

1. The nonperformance charge rate is the BRA clearing price
2. The stop loss is two times the BRA clearing price (2 \* BRA clearing price)
3. The definition of a PAI for a reserve zone or reserve subzone is: a. and b., or c.
  - a. PJM is short primary reserves in a reserve zone or reserve subzone
    - i. The definition of primary reserves is 150 percent of the synchronized reserve requirement
    - ii. The definition of the synchronized reserve requirement is the largest contingency
  - b. PJM calls an emergency action for the same reserve zone or reserve subzone
    - i. The definition of an emergency action is any of the following actions when it encompasses a reserve zone or reserve sub-zone:
      - 1) Maximum Generation Emergency Action
      - 2) Voltage Reduction Warning and Reduction of Non-Critical Plant Load
      - 3) Curtailment of Non-Essential Business Load
      - 4) Manual Load Dump Warning
    - ii. This list of relevant emergency actions explicitly excludes:
      - 1) Pre-Emergency Load Management Reduction Action
      - 2) Emergency Load Management Reduction Action
      - 3) Emergency Voluntary Energy Only Demand Response Reduction Action
  - c. PJM calls one of the identified emergency actions in a reserve zone or reserve subzone:
    - 1) Deploy All Resources Action
    - 2) Voltage Reduction Action
    - 3) Manual Load Dump Action
    - 4) Load Shed Directive