Stability Limits

MIC

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IMM

Dispatch with Stability Limits

- **Surrogate constraints produce inefficient outcomes and unnecessary costs to consumers.**

- **Derates are not an appropriate approach.**

- **Paying generators uplift provides the wrong incentive.**

- **Modelling a capacity constraint eliminates the problems with the status quo approaches and with manual dispatch.**

- **Improvements in the planning process can help avoid issues**

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Inefficiency of Surrogate Constraints

- **PJM attempts to bind the constraint below the actual stability limit.**
  - **Not matching the day-ahead constraint limit**
  - **Dispatchers adjust constraint limits faster than resources can move, violating constraint**
  - **Generators take actions to increase output, violating constraint**
- **Constraint violations trigger a -$2,000 per MWh LMP**
- **Constraint violations create inefficient costs for customers through substantial balancing congestion.**

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Inefficiency of Surrogate Constraints

- **Surrogate constraints are used whether or not the generator agrees to reduce output.**

- **Incorrect assignment of regulation and reserves**

- **Units backed down due to stability can still be assigned reserves and regulation.**

  - **Regulation up can lead to limit violation.**

  - **Reserves cannot be relied on.**

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Derates are Inappropriate

- **Inconsistent with ICAP must offer requirements**
  - **Inaccurate outage reporting: Instructing resources to submit maintenance outages and reduce the Emergency Max MW due to stability limits is not consistent with the ICAP must offer requirement. Work needs to be performed at the facility to qualify as a maintenance outage.**
  - **Noncompliant use of emergency max MW: Instructing resources to reduce eco max due to stability limits is not consistent with the Emergency MW rules. Reduction due to stability is not a tariff defined reason to qualify MW as emergency.**

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Uplift Provides the Wrong Incentive

- **Generators have a role in preventing stability issues.**

- **Generators may have opportunities to address stability problems in the interconnection process.**

- **PJM manages stability limits to protect generators' equipment.**

- **LOC is paid as an incentive to follow dispatch.**

- **Generators limited by stability have a real, tangible reason to follow dispatch.**

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Capacity Constraint Solution

- **The capacity constraint solution would constrain the dispatch of the stability limited generator to the limit determined by PJM's TSA tool.**

- **The capacity constraint would not affect prices.**

- **PJM would not alter the limit from the TSA value in attempt to bind the constraint.**

- **Generator would not receive lost opportunity cost payments.**

Monitoring Analytics

Monitoring Analytics, LLC

2621 Van Buren Avenue

Suite 160

Eagleville, PA

19403

(610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com

Monitoring Analytics