

Stability Limits In Market and Operations Capacity Constraint

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Markets Implementation Committee
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Action Required	Deadline	Who May Be Affected
First Read, inform staff about changes to stability limit rules	09/02/2020	All Stakeholders



- Limit will apply to the sum of the output of the affected units plus ancillary service MW
- If a stability limitation has been identified during the planning process and the unit chooses not to remedy the stability limitation, the operating restrictions for the unit as documented in the ISA will be utilized prior to other units being reduced.

After the Fact Reporting

- Report frequency of the use of the capacity constraint on a monthly basis maintaining the confidentiality of market sensitive data

Penalty/Financial incentive

- LOC credits are not paid for any reduction associated with honoring the stability limit
 - similar to LOC not being paid for economic MW a resource cannot produce due to a ramp limitation

Removed: Tracking additional cost to the system

- Limit will apply to the sum of the output of the affected units plus ancillary service MW
- The units will be dispatched in economic merit order up to the stated limit
- If a stability limitation has been identified during the planning process and the unit chooses not to remedy the stability limitation, the operating restrictions for the unit as documented in the ISA will be utilized prior to other units being reduced.

- Model as a generator output constraint on the affected generators
- The limit will be determined by reliability studies using the TSA tool prior to the Day-ahead run
- The Day-ahead engine will enforce the (MW) output of these resources relative to the stability limit
- The Day-ahead market will not directly reflect this constraint in LMP
- Generation Owner Notified of limitation via phone call

- Model as a generator output constraint on the affected generators
- The limit will be determined by real time reliability studies using the TSA tool
- The SCED engine will enforce the (MW) output of these resources relative to the stability limit
- The real time market will not directly reflect this constraint in LMP
- Generation Owner Notified of limitation via phone call

- The generator stability limit is determined based on TSA study results plus
- Special operating procedures addressing stability limit issues that are presented in Manual 3, Section 5
- This limit is then reflected as a constraint on the output of the affected units

- Transmission Stability Assessment (TSA) tool computes stability limits by using real time network models
- It interfaces with the EMS and uses the State Estimation solution
- Engineers then manually adjust the generator output constraint used in SCED accordingly

- Model as a generation output constraint on the affected generators
- The generation output constraint will be modeled such that the stability limitation will include the total energy and ancillary service MW (reg/synchronized reserve/ NSR/DASR) that can be provided by the unit.

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