

Manual 11:

2.18 Modeling stability limits in Day-Ahead and Real Time dispatch

The ability of a generating unit or a group of generating units to maintain synchronism following a system disturbance can be identified using real time and study applications such as the Transient Stability Analysis (TSA) tool. The TSA tool can determine generation limitations in MWs for a single or multiple generating unit(s). These stability limitations can be modeled in the Day-Ahead and Real Time security constrained economic dispatch processes using a generator output constraint. The unit output constraint will limit the sum of the dispatched MWh (including ancillary services) of the affected generating unit(s) while dispatching them in economic merit order up to the stated limit. Like other operational constraints (e.g. ramp rate limitations) the shadow price of unit output constraints will not be included in the LMP. 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 Interconnection Service Agreement (ISA) will be utilized prior to other units being reduced.

PJM will publicly post monthly data to increase transparency on the frequency, location and number of affected units to the extent it is consistent with confidentiality rules.