2.1.2.5 Ramp Limits

PJM validates all Interchange Schedule requests against a net interchange ramp limit. This validation occurs at the time of submission or modification of a Ramp Reservation or a Tag, with the exception of Dispatchable Reservations on all interfaces and Tags scheduled across the NYISO interface. Dispatchable Reservations are validated prior to curtailing or reloading the Tag. Tags scheduled across the NYISO interface will be validated only after NYISO has initiated an economic evaluation and has issued the preliminary results of that evaluation. The net interchange ramp limits may be modified by PJM system operators based on their evaluation of current and expected operating conditions.

Examples of occasions during which PJM may modify the net interchange ramp limits include but are not limited to Hot and Cold Weather Alerts, Maximum Emergency Generation Alerts and Actions, Minimum Generation Alerts and Actions, and Emergency Mandatory Load Management Reductions. PJM may modify the ramp limits at times when scheduled interchange fluctuations could result in system control issues or an increase in overall costs, such as an expected increase in make whole payments.

Under such conditions, PJM system operators may either increase the ramp limits to allow additional schedules or decrease the ramp limits to reduce schedule changes. The import and export ramp limits may be adjusted separately. Ramp limit violations caused by a PJM ramp limit modification will be corrected per section 2.1.2.6 Ramp Limit Violations.

PJM enforces two separate ramp limits:

- PJM Variable Ramp

  At no time can the difference in the net interchange between two consecutive 15-minute intervals be greater than the ramp limit designated by PJM system operators at those intervals. Ramp availability is allocated on a first-come, first-serve basis. Refer to Exhibit 1 for an example that illustrates how the ramp is calculated for any given 15-minute interval. PJM's default ramp limit is ± 1000 MW for each interval.

- NYISO Interface Ramp

  PJM also monitors an interface ramp limit with the NYISO. At no time can the difference in the net interchange on the NYISO interface between two consecutive 15-minute intervals be greater than ± 1000 MW. Ramp availability is allocated on a first-come, first-serve basis. Interchange Schedules on the NYISO interface will be evaluated first against the PJM net interchange ramp limit and then against the NYISO Interface ramp limit. The PJM net interchange ramp and the NYISO interface ramp are not cumulative.

2.1.2.6 Ramp Limit Violations

Though ExSchedule actively prevents many of the user-initiated actions that could cause the PJM net interchange ramp limit to be exceeded, there are still certain actions, such as the expiration of a Ramp Reservation, which can cause a ramp limit violation. The ramp limit may also be exceeded as a result of Tag curtailments and Transmission Loading Relief (TLR) procedures enacted by either PJM or another Balancing Authority or Reliability Coordinator.

Corrective actions to alleviate ramp limit violations are pursued at the discretion of PJM system operators, who will determine whether PJM shall remediate a ramp limit violation by taking into account current and expected system conditions. In the event that a ramp limit violation merits corrective action, Tag curtailments will be used to bring the interval back within the established limit. Due to the extremely volatile nature of ramp, these Tag curtailments may be classified as Late based on the Timing Requirements in the NERC INT Reliability Standards. To the extent possible, PJM will coordinate Late curtailments with Neighboring Balancing Authorities.

All Tags are eligible for curtailment, regardless of whether they actively contribute to the ramp violation. For Tags contributing to the ramp in the violated interval, PJM utilizes a last-in, first-out methodology to determine which Tags will be subject to curtailment, and Transmission Service priority is ignored. For Tags not contributing to the ramp in the violated interval, Transmission Service priority is a primary consideration and timestamps are only used to rank Tags within the same Transmission Service priority level.

Tag curtailments will always be issued for the shortest possible duration, meaning that the minimum curtailment will be 15 minutes in length. If necessary, the eligible Tags may be terminated earlier than the originally requested stop time or pushed to start later than the originally requested start time. If the next eligible Tag holds a constant MW value over the time of the violation, that Tag may be curtailed at the time of the violation in order to provide relief.

If PJM system operators determine that a market participant has directly contributed to a ramp limit violation, then they will specifically curtail Tags belonging to that market participant in order to correct the violation. In the event that curtailments to the market participant's Tags are insufficient to correct the violation, PJM system operators will default to the last-in, first-out curtailment policy.

For emergency circumstances in which a market participant needs to terminate a Tag but is prevented from doing so by the ramp limit, PJM must be contacted directly. PJM system operators will then manually approve the Tag adjustment and notify the market participant of the resulting ramp limit violation. If the market participant has additional Tags that could be curtailed to bring the ramp back within the limit, they will be required to modify those Tags to fix the violation. If they do not have a Tag that can be used to correct the ramp limit violation, PJM will default to the last-in, first-out curtailment policy.

All observed cases of inappropriate behavior surrounding the reservation and use of ramp will be reported to PJM's Independent Market Monitor.