



FERC Technical Conference on Managing Line Ratings: AD19-15 Panel 3

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FERC Should Require TOs to provide AARs

We believe FERC should require AARs for the following reasons:

1. Potential benefits greatly exceed any AAR implementation costs.
 - ✓ We have estimated annual benefits of AARs/STE averaging \$150 M/year for last 2 years, and estimates are shown to be consistent with actual benefits from ongoing TO Programs.
2. Vast majority of TOs in MISO do not voluntarily provide AARs.
 - ✓ As the Staff Paper notes, Static Ratings may be based on severe conditions but forecasted conditions may be favorable (e.g. temperatures at 40 rather than 104 degrees F.) and adjustments can be made reliably.
 - ✓ MISO/IMM have worked with TOs on AARs with limited success.
 - ✓ MISO has systems and software to enable AARs but very few AARs are provided, and many TOs are resistant as a matter of policy.
 - ✓ TO agreements, OATTs, NERC/IEEE Standards don't require AARs.
 - ✓ Under the current regulatory treatment of transmission, most TOs do not benefit from adjusting ratings and the proposed requirement is the most reasonable solution.



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3. Recent TO initiatives in MISO to provide AAR (and Short-Term Emergency Ratings) have shown significant benefits
 - ✓ But much larger potential benefits remain.
 - ✓ There have been no reliability issues related to voluntary TO or MISO coordinated AAR programs to date.
4. Implementation and associated process would have additional benefits:
 - ✓ **Reliability Benefits:** more complete and frequent review of Ratings by TOs and Transmission Providers verification resulting in more familiarity and details on facility ratings and ratings methodologies.
 - ✓ **Improved Planning:** more complete information on limiting elements would enhance the planning process (identifying lower cost upgrades).
5. For these reasons, we believe a requirement is needed to get widespread use and benefits of AARs on lines and other adjustable facilities (requirement should include STEs – equally important for benefits).



What would a requirement look like?

- A “requirement” should be subject to a process for verification of methodology of providing AARs.
- TOs would continue to have ultimate authority to determine ratings.
 - ✓ AARs would be provided by TOs or calculated by Transmission Provider per approved methodologies.
 - ✓ Similar to TRM, requirement can accommodate uncertainty in forecasted ambient conditions with additional safety margins.
 - ✓ Requirement and verification could be prioritized based on past or anticipated market conditions but congestion patterns change priority.
 - ✓ Transmission Providers would maintain current/comprehensive data on ratings methodologies, limiting elements and able to verify where telemetry or other technical factors limit AARs.
 - ✓ Short-Term Emergency Ratings should also be required and TOs should provide Transmission Providers specific time frames associated with STEs.



AARs in ATC/AFC and TLR

- Because temperature and other ambient conditions are variable and uncertain, AARs are most valuable in short-term, non-firm uses of transmission.
- In RTO/ISO markets, ATC/AFC is primarily used to reserve longer-term firm service so requiring the use of AARs may not be appropriate.
 - ✓ Benefit of AARs would primarily be in the Day-Ahead and Real-Time markets to schedule energy more efficiently.
 - ✓ Requiring AARs for firm service could cause AARs to be more conservative.
- In non-RTO/ISO markets, ATC/AFC govern the sale of transmission service from long-term firm to short-term non-firm service.
 - ✓ Applying the AAR requirement to the short-term non-firm service would be appropriate and beneficial. This would be analogous to requiring AARs in the RTO's day-ahead and real-time markets.
- It is also vitally important that the AAR requirement be extended to TLR.
 - ✓ TOs in non-RTO/ISO markets should also have a comparable requirement to provide AARs/STEs to the Transmission Providers for use in Reliability Coordination and avoiding unnecessary TLR based on Static Seasonal ratings.