

Additional Issues Relating to the Implementation of Dynamic Line Ratings (Phase 2)

Issue Source

PJM at the request of stakeholders

Issue Content

Additional issues relating to the implementation of dynamic line ratings (DLR).

Key Work Activities and Scope

In light of two recent FERC issuances,¹ this work effort will explore whether any governing document or manual changes are needed to address additional topics relating to DLR implementation:

- a. Additional considerations regarding notice of an intent to implement DLR.
- b. Impact (if any) of DLR implementation to ARR/FTR markets.
- c. Impact (if any) of DLR implementation to Planning Processes and whether DLR is utilized in Planning and whether planned curtailment will be considered.

Expected Deliverables

1. Stakeholder education
 - a. Education already provided: the March 30, 2021 [Operating Committee Special Session on DYNAMIC RATING Education](#).
 - <https://pjm.com/-/Dynamic Rating Impacts>
 - <https://pjm.com/-/Dynamic Rating Market Efficiency>
 - <https://pjm.com/-/Emergent Technologies Modeling Overview>
 - <https://pjm.com/-/Dynamic Line Ratings>
 - b. Additional education as needed
2. Potential governing document/manual changes

Out of Scope

The authority of Transmission Owners to voluntarily implement DLR, determine transmission line rating methodologies, and calculate transmission line ratings.

Decision-Making Method

Tier 1, consensus (unanimity) on a single proposal

¹ See, e.g., Managing Transmission Line Ratings, Order No. 881, 177 FERC ¶ 61,179 (2021) (“Order No. 881”); see also Implementation of Dynamic Line Ratings, Notice of Inquiry, 178 FERC ¶ 61,110 (2022) (“DLR NOI”).

Stakeholder Group Assignment

For consideration at Standing Committees or a new Senior Task Force.

Expected Duration of Work Timeline

The expected duration of work will be set when the appropriate stakeholder group assignment is determined using the CBIR process.

Start Date	Priority Level	Timing	Meeting Frequency
Click here to enter a date.	<input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<input type="checkbox"/> Immediate <input checked="" type="checkbox"/> Near Term <input type="checkbox"/> Far Term	<input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Quarterly

Charter

(check one box)

<input type="checkbox"/>	This document will serve as the Charter for a new group created by its approval.
<input checked="" type="checkbox"/>	This work will be handled in an existing group with its own Charter (and applicable amendments).

More detail available in M34; Section 6

Appendix:

Managing Transmission Line Ratings, Order No. 881, 177 FERC ¶ 61,179, at P37, P255 (2021) (“Order No. 881”):

P37: [C]urrent transmission line rating practices in RTOs/ISOs that do not permit the acceptance of DLRs from transmission owners that use DLRs are contributing to unjust and unreasonable wholesale rates by acting as a barrier to accurate transmission line ratings. Therefore, as part of remedying inaccurate transmission line ratings that result in unjust and unreasonable wholesale rates, we require RTOs/ISOs to establish and maintain the systems and procedures necessary to permit the acceptance of DLRs from transmission owners that use them. As the Commission explained in the NOPR, some RTOs/ISOs rely on software that cannot accommodate transmission line ratings that frequently change, such as DLRs.⁴⁹ Without reflecting such frequent changes to transmission line ratings, such software serves as a barrier that prevents transmission owners in RTOs/ISOs from implementing DLRs and better reflecting the actual transfer capability of the transmission system. The result is that, even if a transmission owner sought to implement DLRs, the RTO's/ISO's energy management system (EMS) may not be able to accept and use the resulting transmission line rating. The potential inability of RTOs/ISOs to accept and use a DLR prevents RTO/ISO markets from benefiting from the more accurate representation of current system conditions. Therefore, we require RTOs/ISOs to establish and maintain the systems and procedures necessary to permit the acceptance of DLRs from transmission owners that use them.

P255: [W]e adopt the Commission's proposal in the NOPR to require RTOs/ISOs to establish and maintain systems and procedures necessary to allow transmission owners to electronically update transmission line ratings (for each period for which transmission line ratings are calculated) at least hourly, with such data submitted by transmission owners directly into the RTO's/ISO's EMS through SCADA or related systems. We continue to find that, because DLR implementation may be economic in certain applications, absent RTOs/ISOs having these capabilities, voluntary implementation of DLRs by transmission owners in some RTOs/ISOs would be of limited value, as their more dynamic ratings and resulting benefits would not be incorporated into RTO/ISO markets. Absent these minimum capabilities, RTO/ISO software would serve as a barrier that prevents transmission owners in RTOs/ISOs from implementing DLRs that can better reflect the actual transfer capability of the transmission system and, consequently, wholesale rates would not remain just and reasonable. Additionally, as the Commission stated in the NOPR, we continue to expect that many of the systems and procedures RTOs/ISOs would need to develop to accept DLRs are likely to already be required as part of compliance with the AAR requirements adopted in this final rule.

In addition, effective March 14, 2022, Order No. 881 has amended Part 35, Chapter I, Title, 18 of the Code of Federal Regulations as follows:

18 C.F.R. § 35.28(g)(13)(i)

(g) *Tariffs and operations of Commission-approved independent system operators and regional transmission organizations.* * * * (13) *Transmission line ratings*

(i) Each Commission-approved independent system operator or regional transmission organization must establish and maintain systems and procedures necessary to allow any public utility whose transmission facilities are under the independent control of the independent system operator or regional transmission organization to electronically update transmission line ratings for such facilities (for each period for which transmission line ratings are calculated) at least hourly, with such data submitted by those public utility transmission owners directly into the independent system operator's or regional transmission organization's EMS through SCADA or related systems.

Implementation of Dynamic Line Ratings, Notice of Inquiry, 178 FERC ¶ 61,110, at P3, P7 (2022): Order No. 881 requires RTOs “to establish and maintain the systems and procedures necessary to allow transmission owners in their regions to electronically update transmission line ratings on at least an hourly basis (thereby enabling the RTO/ISO to use DLRs from transmission owners that voluntarily adopt them)” and stating that the Commission is “issuing this NOI to further explore whether DLR implementation is required.”