

Dynamic Line Ratings in PJM To Date

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DLRTF
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Dynamic Line Ratings (DLR) at PJM ... Key Events

Early 2000's – 2020: PJM supporting EMS DLR functionality and pilot projects.

Oct.2020: At PJM Emerging Tech Forum, PPL states [objective](#) to deploy DLR by Q4.2020.

Jan.2021: PPL provides [announcement](#) at OC to operationalize DLR into PJM.

Mar.2021: OC Special Sessions commence on DLR Education.

Nov.2021: PJM introduces OC [PS/IC](#) around DLR integration within PJM Operations.

Dec.2021: [FERC Order 881](#) requires RTOs/ISOs to establish & maintain systems & procedures to allow DLR. Opens new Docket No. AD22-5-000 to further explore DLR.

April.2022: [Manual language](#) to support PJM Operations DLR integration [approved](#). [PS/IC](#) #2, Potential Additional Issues re: DLR [approved](#) as an OC Task Force.

Sep.2022: PPL slated Go-Live (9/28 in Real-time) for DLR on the 3 230kV facilities.

Full PJM filing comments regarding FERC NOI exploration of the potential value of DLR implementation can be found [here](#).

- PJM emphasized that DLR technology is not appropriate for reliability based RTEP projects and not a substitute for upgrades.
- If FERC mandated, PJM recommended case-based criteria on thermally limited lines experiencing:
 - Average \geq \$2m per year in market congestion or Hours/year threshold
 - Projected congestion of \$1 or more consistent with economic planning processes
- Full range of costs should be considered, including the initial investment for a single DLR facility if placed upon a given investor.
- Consideration for Order 881 AAR-impact, which will not be fully realized until July 2025, may have upon DLR implementation.



PJM DLR Operationalization Manual Language Summary

Manual 1, Section 3.2.4

- Added Dynamic Line Ratings to the types of data that need to be communicated to PJM when there are Device, RTU or ICCP link outages

Manual 3, Section 2.1.1

- Split ambient (lookup table only) subsection, 2.1.1.1, away from a new DLR subsection, 2.1.1.2 which:
 - Includes DLR real-time and forecasted rating requirements around submission (real-time & forecasted) and backup procedures (including Rating Set Lookup Tables)
 - Includes DLR facility awareness/notification timeline (aligned for FTR markets and member transparency) and process (via OC notification)
 - Outlines TO and PJM actions/considerations around DLR outages.

Manual 3A, Appendix A

- Covers real-time DLR changes and tracking and visibility within the eDART application's TERM functional area.
- Includes public posting information around forecasted DLR.

Additional considerations regarding notice of an intent to implement DLR. – DLRTF Scope a.

M-03, Subsection 2.1.1.2 contains the following:

DLR Notice Requirement:

In order to assure the readiness of PJM market and operations systems for any facility moving to the use of DLR, PJM requires notification in alignment with the rules in place for Transmission Outages exceeding 30 calendar days in duration. Notice must be made at PJM Operations Committee stakeholder meeting via a presentation per the following deadlines:

--Must be presented before February 1 (for the following planning cycle, June 1 – May 31) OR by the 1st of the month six months in advance of the installation and use within the Operations time horizon, whichever is more restrictive. (i.e., notice for a facility moving to DLR in June of an upcoming year would have to be presented before December 1st.)

And, given the rationale, indirect relation to : Impact (if any) of DLR implementation to ARR/FTR markets. – DLRTF Scope b.

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